610.5
I615
N45

MAY 1941

Volume II. Number 5.

DISEASES OF THE NERVOUS SYSTEM

A PRACTICAL JOURNAL ON PSYCHIATRY AND NEUROLOGY

PUBLISHED MONTHLY for the PHYSICIAN in the GENERAL PRACTICE of MEDICINE

CONTENTS:

THE GENERAL PRACTITIONER AND ALCOHOLISM (Page 148)
Edward A. Strecker, M.D., Philadelphia, Pennsylvania

THE DENTAL AND ORAL BASIS OF CERTAIN NEUROPSYCHIATRIC STATES (Page 152)
Gilbert C. Anderson, M.D., New Orleans, Louisiana

THE TREATMENT OF CRANIOCEREBRAL INJURIES (Page 157)
James Greenwood, Jr., M.D., Houston, Texas

THERAPY OF LATE SYPHILIS (Page 163)
Walter H. Squires, M.D., *and* S. A. Molle, M.D., Eloise, Michigan

THE LANGUAGE OF PSYCHIATRY (Page 169)
O. Spurgeon English, M.D., Philadelphia, Pennsylvania

EDITORIAL, SANITARIA, BOOK REVIEW, ABSTRACTS

ASSOCIATE EDITORS

Peter Bassoe, M.D. ..... Chicago, Illinois
A. E. Bennett, M.D. ..... Omaha, Nebraska
Franklin G. Ebaugh, M.D. ..... Denver, Colorado
O. Spurgeon English, M.D. ..... Philadelphia, Penn.
Temple Fay, M.D. ..... Philadelphia, Penn.
Walter Freeman, M.D. ..... Washington, D. C.
Jas. K. Hall, M.D. ..... Richmond, Virginia
George T. Harding, M.D. ..... Columbus, Ohio
A. Hauser, M.D. ..... Houston, Texas
Eugen Kahn, M.D. ..... New Haven, Connecticut
Louis J. Karnosh, M.D. ..... Cleveland, Ohio
Jacob Kasanin, M.D. ..... San Francisco, California
H. Beckett Lang, M.D. ..... New York, N. Y.
Frank H. Luton, M.D. ..... Nashville, Tennessee
Wm. Malamud, M.D. ..... Worcester, Massachusetts
Donald McEachern, M.D. ..... Montreal, Canada
Karl A. Menninger, M.D. ..... Topeka, Kansas
Adolf Meyer, M.D. ..... Baltimore, Maryland
Glenn Myers, M.D. ..... Los Angeles California
Hans H. Reese, M.D. ..... Madison, Wisconsin
Paul L. Schroeder, M.D. ..... Chicago, Illinois
Theodore A. Watters, M.D. ..... New Orleans, La.
Wm. Walter Young, M.D. ..... Atlanta, Georgia

Titus H. Harris, M.D.
Galveston, Texas
EDITOR-IN-CHIEF

YEARLY SUBSCRIPTION $2.50
SINGLE COPIES 25 Cents

Murray Kornfeld
Chicago, Illinois
MANAGING EDITOR

WOODCROFT HOSPITAL

Pueblo, Colorado

Telephone 84

● *An institution for the diagnosis, care and treatment of those nervous and mentally ill and addictions.*

CRUM EPLER, Superintendent

COMPTON SANITARIUM
AND
LAS CAMPANAS HOSPITAL

COMPTON, CALIFORNIA
(Near Los Angeles)

Compton Sanitarium is a private psychiatric hospital with 120 beds. Emphasis is given psychotherapy by a staff of resident psychiatrists. Other treatment procedures are duly evaluated and administered. Careful records are maintained. There are psychiatrically trained graduate nurses; student nurses through affiliation; nursing attendants; dietitian; occupational therapist; recreational therapist; hydrotherapist; masseuse. Las Campanas Hospital (30 beds) provides adjunct general hospital facilities. Compton Sanitarium and Las Campanas Hospital are approved by the American College of Surgeons.

GLENN MYERS, M.D.,
Medical Director.

Beverly Hills Sanitarium

for

The Study and Treatment of Nervous and Mental Diseases

218 No. Westmoreland DALLAS, TEXAS Telephone 9-3114

This sanitarium is a psychopathic hospital with a home-like environment and is equipped to treat psychiatric and neurological cases in a most scientific manner by means of phychotherapy, occupational therapy, recreational therapy and physiotherapy, including hyperpyrexia, insulin and metrazol treatments in special conditions.

ARTHUR J. SCHWENKENBERG, M.D.
Attending Neuropsychiatrist

ROBERT E. WINN, M.D.
Resident Physician

VOL. II MAY 1941 No. 5

EDITORIAL OFFICES
UNIVERSITY OF TEXAS SCHOOL OF MEDICINE
800 AVENUE B., GALVESTON, TEXAS

BUSINESS OFFICES
PHYSICIANS POSTGRADUATE PRESS
500 NORTH DEARBORN ST., CHICAGO, ILLINOIS

PRINTING OFFICES
ALAMOGORDO ROAD, EL PASO, TEXAS

DISEASES of the NERVOUS SYSTEM

(PUBLISHED MONTHLY)

A PRACTICAL JOURNAL ON PSYCHIATRY AND NEUROLOGY

EDITORIAL COMMENT

Insane People Are Sick

Insane people are sick people and, as such, are entitled to hospital care in exactly the same degree as patients suffering from appendicitis or heart disease. However, before a mentally ill person can enter a state hospital a formal court charge and court order are necessary. We are told that this procedure is necessary because the patient's liberties are being taken from him and he must be given an opportunity to defend himself. Let us pause for a moment and consider the "liberties" of the patient with a surgical condition. No court order is required to place him in a general hospital, yet he cannot leave without permission. His clothes are removed, and his hospital gown is insufficient apparel for street wear. We take the liberty away from the patient suffering from a communicable disease, such as diphtheria or scarlet fever without any kind of court action.

Why then is this antiquated procedure of court action still used in mental illness? It is because we still look on insanity as a kind of immorality or crime. It is for this reason, too, that we feel the patient must have an opportunity to defend himself in court.

It is well known that many insane patients are indifferent to hospitalization or actually desire it. For them, it should be no more difficult to enter a state hospital than a general hospital. Many laymen recognize this need. For example, a few years ago, I attended a meeting of the Appropriations Committee of a state legislature. It was considering a request for money to operate a state mental hospital. One of the legislators asked the superintendent of that hospital if it were true that he denied admission to persons on voluntary application. The superintendent replied that only those persons who were found insane in the courts could be admitted. The legislator then asked if this meant that his neighbor, an elderly woman who suffered periodic attacks of mental illness, would have to be declared insane to receive the benefits of treatment. When he was advised that this would be necessary, he replied, "Then I shall vote against any appropriation for that hospital and shall do everything in my power to have it closed." It is significant that the superintendent did not continue long in his job. The policy of that hospital changed; and two years later, 70 to 80 per cent of all new patients admitted to it came on voluntary application.

Although the general policy in the United States is to admit only by court procedure, in a few states admission on the recommendation of physicians is possible, when it is supported by a court order. However, only in one state of the 48, Maryland, can a patient be admitted to a mental hospital without any court order whatsoever.

In Illinois, the legislature now has under consideration an amendment to the existing code, permitting its residents to voluntarily enter state mental hospitals for treatment—and the only requirement necessary is the recommendation of two physicians licensed to practice in the vicinity. This bill should be passed and enacted into law. What is more, the *principle* should be extended to the entire country. Only in this way, can the state mental hospital serve in its fullest capacity—as an institution for medical care, rather than an institution of confinement for misconduct.

P. L. S.

The General Practitioner and Alcoholism

EDWARD A. STRECKER, M.D.
Philadelphia, Pennsylvania

Dr. Strecker graduated from the Jefferson Medical College of Philadelphia in 1911. He is at present, Professor of Psychiatry in the Undergraduate and Graduate Schools of Medicine of the University of Pennsylvania. He is a Fellow of the American College of Physicians and a Diplomate of the American Board of Neurology and Psychiatry. He is a member of the American Neurological Association, the American Psychiatric Association, the Association for Research in Nervous and Mental Disease, and the American Orthopsychiatric Association. His degrees, hospital appointments and writings are too numerous to list.

The renaissance of research into the fundamental nature of alcoholism has yielded valuable therapeutic dividends to the general practitioner. Unfortunately, they have been largely pharmacological dividends. No longer is the general practitioner non-plussed or wanting in therapeutic resources when he is confronted with the organic complications of alcoholism. For instance, in such complications as delirium tremens or peripheral neuritis, the practitioner understands the nice etiologic balance between the alcohol itself and existing vitamin deprivations and is able to prescribe skillfully and tellingly. No longer is he confused by clinical pictures startlingly like pellagra. Laboratory and clinical research have furnished him with valuable guideposts and, again, he is able to allot with accuracy the causal significances of alcohol and vitamin poverty.

It would be pleasant if one could conclude this statement by adding that his understanding of the psychopathological implications had also been measurably increased and that he was no longer liable to become a victim of the snares and pitfalls which so frequently trip the psychologically unwary. However, unfortunately, this statement cannot be truthfully added and, generally speaking, the psychological management of alcoholism by the general practitioner tends to be both unskillful and unsuccessful.

It should be recorded that it is true that such lack of understanding and success is far from being solely the fault of the practitioner. His path of management is made exceedingly difficult and often impassible by archaic attitudes of families and friends who think "they know." The lay-public, whose life has been impinged upon by the disturbing behavior of an alcoholic relative or friend, is willing to admit that they do not comprehend the somewhat delicate and intricate chemical imbalances resultant upon alcoholism and, consequently, they are willing to leave these phases of treatment to the physician. They do, however, think they understand *thoroughly* the personality of the alcoholic and how best to manage that angle of the illness. They do not hesitate to patiently explain to the physician that his ideas along these lines are impractical and visionary.

It should be recorded, too, that the physician who, in the practice of medicine, struggles with the problems of the alcoholic has made at least some psychological progress in the face of great difficulties. Generally speaking, he is no longer willing to permit the hospital resources which are available to him to be used for brief interludes of imperative sobriety. No longer is he willing to furnish a few days of watery oasis in the arid aftermath of alcohol. Even this small step has had to be taken against great resistance. Families and friends still complain bitterly when the sorely tried family physician declines to furnish the ingredients for a brief sobering-up phase which the doctor knows all too well is merely a prelude to another debauch. Not infrequently, the family changes doctors. To the credit of the practitioner, it should be said that he has taken any material loss with cheerful philosophy and has stuck to his ideals. When I was a young physician, practically every general hospital, even the most dignified and respectable, had a private ward for "drunks," where alcoholics too jittery to take another drink were admitted and "fixed-up." The average duration of hospital residence in these wards was probably less than a week. Now it is difficult to find a general hospital which is willing to participate in such a dubious arrangement. Time marches on.

The paradox involved in the attitude toward alcoholism of even the intelligent laity is so obvious and so gross that it is hard to understand that there should be so much

difficulty in persuading wives and husbands, mothers and fathers and children of alcoholics to arrive at a more intelligent point of view. In effect, they are asking the victim of alcohol with a habit of perhaps many years standing, to perform a very difficult and mature act—the relinquishing of alcohol—and yet, to perform it on a childish basis. They are disappointed when the physician does not enthusiastically participate in such a paradoxical program.

Perhaps at this point it would be well to give a composite picture, based on many years of experience, of the terms into which such immature attitudes are translated into action. This composite consists of a system of persuasion; of rewards even material ones, for a few days sobriety; of threats and punishments for episodes of drunkeness; of devious watching, spying and breath-sniffing; of family scenes — sometimes deliberately set family scenes—perhaps played with dramatic skill and with the idea of producing horrible remorse; of frightening by "horror" pictures of what is happening or what is going to happen to the patient organically and mentally. In this last naive psychological effort the doctor is usually expected to enact the stellar role of pointing out in text-books of medicine reproductions of atrophic livers and degenerated stomachs and then suspend them verbally, like a sword hanging by a thread, over the head of the patient.

At this point, too, it might be well to give in terms of professional experience the net result of such unpsychological psychology. This may be summarized in a few words: The patient is not persuaded; rewards do not please but only confuse him; and as for the remainder of the formula, threats, punishment, remorse (which is horribly real) and frightenings, they act specifically and, usually immediately, in promoting a prolonged debauch in order to drown out the accumulation of sorrow and terror.

Since the words "alcohol" and "alcoholism" have recurred so often up to this point, it is probably time now to give the definition which the author has proposed for the chronic alcoholic.

"The chronic alcoholic is the person who cannot face reality without alcohol, and yet whose adequate adjustment to reality is impossible so long as he uses alcohol."

In order to avoid too lengthy discussion, it may be permissible to state, somewhat arbitrarily, certain facts which have emerged from the study of many histories and from experience with many patients, and upon which certain therapeutic principles have been based.

1) The true chronic alcoholic is much more likely to be, in his personality markings, an introvert rather than an extrovert. The extrovert finding, as he does, his chief stimulus in the companionship of his fellow-men, seeks and enjoys social relationships. Probably because he does not have it, the introvert prizes such social pliability very highly and soon discovers that, at least temporarily, he can attain it through the use of alcohol.

2) From the analysis of our material, it seems clear that chronic alcoholism is neither organic nervous disease nor psychosis, but psychoneurosis. One is left with the conviction that alcohol is utilized just as psychoneurotic symptoms are utilized, in order to effectively screen unsatisfactory external and internal realities.

3) A careful study of the life histories of many alcoholic patients indicates that one is fairly close to thinking in terms of fundamental causation in the discovery of the frequent recurrence of a childhood environment which thwarted, and even completely blocked, the attainment of an adult emotional stature. The common pattern in these histories is one in which the psychological crime of parental loving dominance was perpetrated against the child. The aftermath is obvious. The time comes all to quickly when these children arrive at the chronological age at which society expects and demands emotional maturity accompanied by adult behavior. The emotionally immature individual makes a sorry attempt to satisfy these demands by a few futile and inadequate gestures. He fails. Society begins to exact the penalty for such failure. Perhaps the remainder of the picture, its alcoholic component, is a matter of chance. But it is a chance in which the dice are loaded, since alcohol is not only the most rapidly acting solvent of unpleasant reality, but also the most available and least socially reprehensible of the techniques for evading reality.

4) With intelligent observation of drinkers, irrespective of whether they be social or path-

ological drinkers, it is difficult to miss the inference that the drinking is a response to a demand for regression to lower levels. There are innumerable gradations of these levels. In the social drinker, there is merely the level of slightly lessened responsibility, partial and temporary surcease from the cares and real troubles of everyday life. In pathological drinking, however, the drinker treads the levels of serious immaturity even to the degree of infantile helplessness and phantasy.

In consideration of these principles which have been merely stated and not discussed, it becomes apparent that the motif of a common-sense psychology in the treatment of alcoholism is the motif of combating the immaturity on which the over-indulgence in alcohol depends. If a reasonable segment of mature thinking can be produced, then there will be a complete and enduring recovery.

Bearing in mind that in the psychological treatment of the alcoholic, the primary objective is the building-up of the emotionally mature segment in the personality of the patient and conversely the resultant breaking down of emotionally immature attitudes, the first important therapeutic step is the substitution of a skilled therapist for the wife, husband, old mother or kindly family physician. This therapist from the beginning must refuse to deal with anything but the mature segment in the patient's personality. His attitude must be strictly impersonal, objective and unemotional. In the unfolding of the history, the therapist must interpret and guide but *never* dictate. He must arbitrarily make the patient responsible for and to himself. The therapist does not even give directions for the details of living, in so far as alcohol is concerned. "Shall I have alcohol in the house?" "May I go to the bar of the club?" "How about playing darts in the neighborhood tap-room?" These are questions asked of every therapist by patients unconsciously pleading to remain childishly dependent on someone. The only mature and logical answer the therapist can make to such questions is this: "You shall, may or can or you shall not, may not or cannot, just as you, yourself, decide."

During the treatment, the therapist acts as an inhibitor of the tendency of the patient to travel into erroneous paths of self-deception or rationalization. He will not tolerate naive excuses, however real they may seem to the patient, as to why he drinks to excess. Some of these reasons are as follows: Because they are in poor health; have disagreeable wives; have rigid employers; have made bad investments or because the weather is stormy, etc., etc. These self-deceptions finally descend to the very nadir of gross, obvious rationalizations. Heroic gestures of patients as to their reasons for desiring recovery are also disregarded by the therapist. He knows only too well that while an alcoholic may be genuinely and whole-heartedly miserable or remorseful in contemplating his wife's unhappiness, the degradation of his children or the sadness of his old mother, still the inevitable result of such pathos will be to drown it out in a tidal wave of alcohol.

The most important step that the alcoholic must take is the acceptance of a completely non-alcoholic future. His greatest difficulty in this is not entirely due to the renunciation of the pleasures of alcohol but, in a considerable degree, it is due to the emotional immaturity of the patient. To his ego, pitifully deflated by the view he has had of his childish behavior, it is the final insult to give up the idea that he can "take it or leave it alone." He dallies overlong with the thought that a "man" can do this and he wants so earnestly to prove to his ego that he is a "man." Of course, when he finally does attain the emotional stature of adulthood, he truly understands that no ego belittlement at all is involved in a self-made decision that the only possible choice is never to take alcohol again. However, until such a conviction is formed within the patient—and is so definitely formed that it becomes a very part of the patient's personality—though he may have long periods of sobriety, he will never achieve complete recovery. It has been said to illustrate the firmness of the ex-alcoholic's non-alcoholic decision that should he die and on entering the Heavenly Portals be met by the Guardian of the Gates bearing a cup of Heavenly Ambrosia, he would automatically decline to taste on the suspicion that it *might* contain alcohol.

It is not necessary to reiterate the details of this treatment plan since everything that is done is subjected to the criterion of mature intelligence and the details vary with the needs of the individual patient. There are

many steps in treatment which tend to decrease the time required to reach a recovery level. For example, it often seems wise to open avenues for occupational changes for the patient. Such a change is never made because of alcoholic temptations or opportunities inherent in the job itself, but because it may be inferred from the history and talks with the patient that he is unsuited for the work he is trying to do, while promising and more suitable potentials have been neglected or thwarted. Even in the most flagrant cases of "vocational misfit" it would be entirely contrary to the spirit and basis of this treatment plan for the therapist to bring pressure on the patient to change his job or for the patient, on the other hand, to simply take the therapist's word for the change. In this, as in all other things, the patient, as his segment of emotional maturity grows larger, must face his own problem and emerge with his own decision.

It is, of course, obvious that too many rules would devalue such a plan of re-educational therapy. There are, however, two basic considerations to which every prospective patient must subscribe before the therapist is willing to accept him for treatment. *First,* the patient must, at least to a large degree, convince the therapist that he, *himself,* wants to be cured and sees the necessity for attempting to rid himself of his alcoholism, and because, too, he feels that this particular plan of treatment promises the greatest liklihood of accomplishing his purpose. Patients who accept treatment under persuasion, threat or duress from friends and family will not succeed in getting well. That can only be accomplished when it begins with the realization of the patient that he *must* get well for *himself.*

Second, during the entire treatment there are no non-drinking pacts or promises entered into by the patient because any such pacts, promises or agreements are foreign to the spirit of this treatment. However, the patient *must* agree to notify the therapist as soon as possible in event of a relapse.

It would be quite fair at this point for many readers of this article to accuse the writer of psychological myopia in not stressing the significance of latent homosexuality as a factor in the shaping of pathological drinking. In answer to unspoken questions: The author is convinced that this factor is significant in only a relatively small segment of chronic alcoholism and a fraction of this segment is more satisfactorily dealt with by the psychoanalyst. A review of the long section life histories of many patients would seem to emphasize the importance of what might properly be called "latent heterosexuality" rather than latent homosexuality. Latent heterosexuality is a part and parcel of the emotional immaturity, and reveals itself as a kind of trifling with sex—an incomplete sex life, and, in general, an unwillingness or an inability to put down the foundations which are needed in order to support a completed and mature structure of sex and its implications. In other words, in general, the majority of chronic alcoholics are infantile emotionally in sex as in the other departments of their life. We believe these infantile emotions and their resultant attitudes and behavior are more important as a factor in alcoholism than whether the sexual development of the patient is on a hetero- or homosexual basis.

From many points of view, the re-educational plan of therapy, the fundamentals and outlines of which have been suggested, is psychobiological in its perspectives. Both in the study of life material and in the therapy derived, it is truly eclectic since it utilizes in its plan every important experience and reaction in the life history of the patient.

If the general practitioner will add to his rapidly increasing stores of authentic information concerning the toxic chemistry of alcoholism, a simple and reliable psychological hypothesis and put it into treatment terms, he will find that the management of alcoholism—a too sadly neglected segment of his practice—will come to be among the most interesting and satisfactory of his professional activities.

111 North 49th Street.

The Dental and Oral Basis of Certain Neuropsychiatric States

GILBERT C. ANDERSON, M.D., F.A.C.S.
New Orleans, Louisiana

Dr. Anderson graduated from the College of Physicians and Surgeons of Columbia University in 1917 and served his interneship and residency in surgery at the City Hospital and New York Hospital of New York. He was a First Lieutenant in the Medical Corps, U.S.A., assigned to neurosurgery, in World War I. He was Fellow in Neurosurgery at the Mayo Clinic 1924-1927, and since that time has practised neurosurgery in New Orleans.

At present, Dr. Anderson is Professor of Clinical Surgery in the School of Medicine of Louisiana State University. He is on the staffs of the New Orleans Charity Hospital, Touro Infirmary, Baptist Hospital, Hotel Dieu, French Hospital, Eye, Ear, Nose and Throat Hospital, U. S. Marine Hospital, and Flint-Goodridge Hospital. He is a Fellow of the American College of Surgeons and the Southeastern Surgical Congress, a member of the Harvey Cushing Society, Central Psychiatric Society, and New Orleans Society for Psychiatry and Neurology, of which he is a past president. He is a Diplomate of the American Board of Surgery and the American Board of Neurological Surgery. He is the author of various papers on neurological surgery.

The close association of the internist with the dentist, the oculist and the otorhinolaryngologist is heartily approved and the practical implications of the relationship are carried out as a matter of course. The association of the neurologist and psychiatrist with the oculist and the otorhinolaryngologist is almost as close, and it is to be regretted that their relationship with the dentist is by no means as intimate.

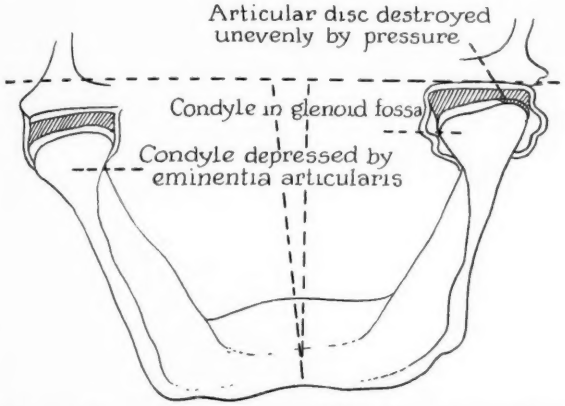
Disease of the mouth, nose, eyes, ears and sinuses is often reflected in the nervous system, and, vice-versa. Lay persons naturally refer their symptoms primarily to the site of the acute trouble as they locate it. The patient with a brain tumor, therefore, is likely to consult the ophthalmologist for the relief of his headaches and impaired vision. The true source of the symptoms, however, is usually recognized at once and he is promptly referred to the neurologist. In the same manner, the patient who is tortured with trigeminal neuralgia is likely to consult the dentist for relief of the pain he refers to his teeth, though he is not always so fortunate in his consultant. Indeed, if I were asked to name the single disease with which dentists might most profitably familiarize themselves, I should without hesitation select trigeminal neuralgia. I am certain that such knowledge would definitely reduce the number of unnecessary extractions which are now being performed for this disease.

It is easy to understand why the patient with trigeminal neuralgia is likely to refer his trouble to his teeth. The onset of the pain is usually in the third, or, often, in the second division of the cranial nerve and it is not unusual, at least during the early stages, for the pain to be definitely limited to the teeth or even to a single tooth. The diagnosis is further confused by the almost exclusive incidence of trigeminal neuralgia in persons of advanced years, who frequently have defective teeth which might reasonably give rise to considerable pain of true dental origin. In such cases the situation is naturally different, for focal infection may be a factor in the neuralgic pain, even if it is not the real cause, and the extraction of the diseased teeth is entirely justified. On the other hand, the history of trigeminal neuralgia is so characteristic, especially if the "trigger zone" is present, that it is hard to understand the number of patients who reach the neurologist edentulous because their dentists have not recognized that the teeth are merely accessory to the crime and not the criminal *per se*.

All of the errors, however, cannot be laid at the door of the dentist. The neurologist might, with equal profit, consider the number of supposed neurologic and neuropsychiatric states which actually are due to dental disease. Malocclusion with resulting malfunction of the temporomandibular articulation is a condition in point, and Costen[1-4] has collected 125 proven cases, most of which had previously been diagnosed as other conditions. The symptoms, in general, are referred to the region of the ear. They include: intermittent or continuous impairment of hearing; a sensation, more marked at meal times, that the ears are stopped up or stuffed; noises in the ear during the act of mastication, such as humming, buzzing or snapping; dull, vague pain about the ears; nystagmus; dizziness, which is intermittently mild and severe; headache, severe or constant, located in the top or back of the head or behind the ears and growing more severe as day advances;

burning sensations in the throat, nose and tongue; herpes of the auditory canal, external ear, and oral mucous membrane.

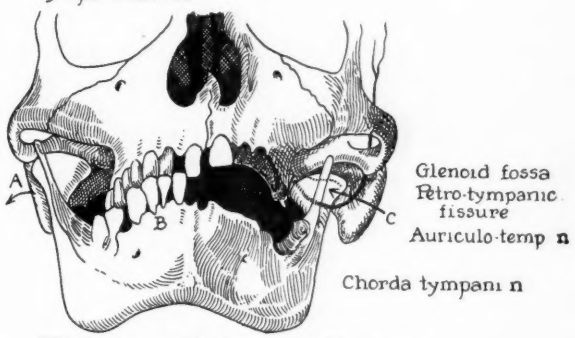
The explanation of these symptoms is not difficult. They are likely to develop whenever any condition is present which allows overbite and a corresponding malposition of the bony components of the joint. Such conditions include: absence of the molars on one or both sides, wearing-down of the natural teeth, the use of ill-fitting or worn-down dentures, or atrophy of tissue beneath dental plates which have been worn for a long time.



"Asymetric position of condyles due to uneven support of molars or lack of support on one side." (Prentiss). From Costen, James B.: A Syndrome of Ear and Sinus Symptoms Dependent upon Disturbed Function of the Temporomandibular Joint, Ann. Otol., Rhin. & Laryng., 63: 9, March, 1934.

The brunt of the bite is normally borne by the molars. When they are defective or absent the force is divided between the more anterior teeth and the posterior joint. Overbite, which shortens the vertical distance between the upper and lower jaws, produces an abnormal relationship in the temporomandibular joint, the bone in the glenoid fossa becomes eroded, and finally there is left only a very thin plate between the moving condyle and the dura. Each bite impacts and rocks the condyle in the glenoid fossa, and the rocking movement, in turn, exerts pressure on or near the auriculotemporal nerve, the pressure being exerted mesial to the capsule or possibly backward on the chorda tympani. Relaxation of the joint, in addition, produces an abnormal relationship of certain muscles in the immediate vicinity, with resulting pressure on the Eustachian tube with every bite, so that vertigo and deafness almost inevitably occur.

A. Relaxed ligament of mandibular joint permits play of condyle downward
B. Remaining tooth support holds, or lower teeth shift laterally during closure
C. Condyle on edentulous side shifts mesially, irritating auriculo-temporal and chorda tympani nerves



Effect on mandibular joint of lack of molar support on one side

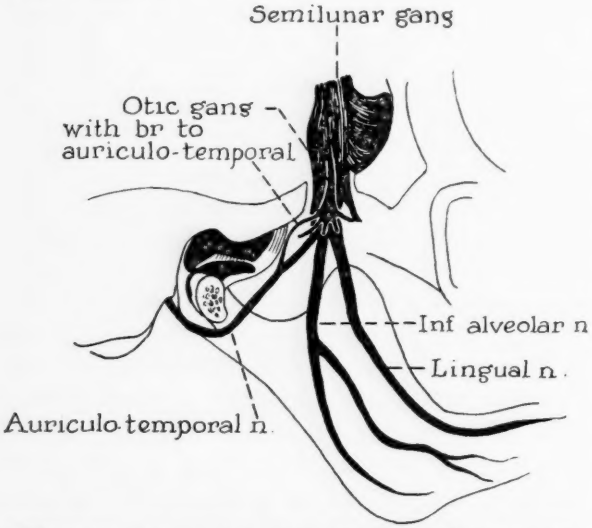
"The manner in which the condyle impacts the auriculo-temporal and chorda tympani nerves is exactly the same when the natural teeth are worn, or badly occluding. The side on which pain is produced varies, however, according to the side used for chewing, or to the position at which the mal-occluding teeth come to rest." (Conrath) From Costen, James B.: A Group of Symptoms Frequently Involved in General Diagnosis, Typical of Sinus and Ear Disease and of Mandibular Joint Pathology, J. Missouri M. A., 32: 184, May, 1935.

The diagnosis is often missed, not because it is difficult, but because the proper dental examination is not made. The finding of any dental condition which might cause overbite furnishes the clue at once. Other symptoms and signs which suggest the diagnosis include: tenderness on palpation of the mandibular joint; looseness of the condyles within the joint capsule; weaving of the condyles from side to side when the jaw is opened and closed; and headache which is typical in character and location. Relief of deafness and vertigo by inflation of the Eustachian tubes is highly significant, as is the prompt relief obtained by the wearing of a small, flat disk of cork between the molars for a few days. Permanent relief is almost always secured by building up the bite and thus achieving reposition of the joint.

One should not assume too quickly, of course, that so simple an explanation as malocclusion is entirely or even partially responsible for the symptoms, particularly in patients in middle life and beyond. Headache and vertigo are symptoms common to a very large number of diseases. They are particularly likely to be present in middle and late life in such diseases as cardiac states, arte-

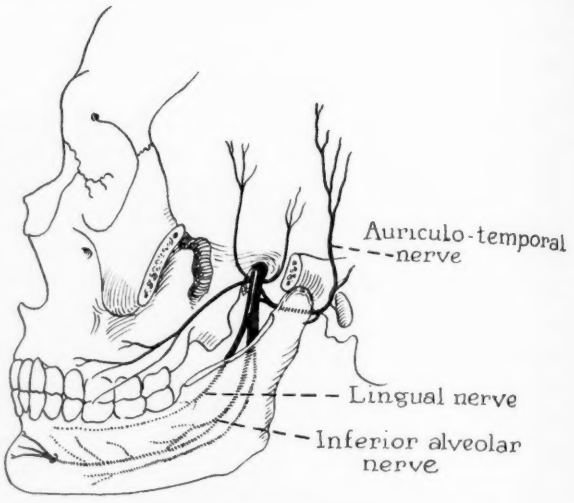
riosclerosis, hypertension, nephritis, intestinal stasis and intoxication, and various ocular conditions. If the patient still complains of his original symptoms when these diseases have been eliminated and when all other abnormal conditions have been corrected, then his dental status may fairly be considered responsible.

In this connection, Klemme[5] describes a particularly interesting case. Following the extraction of a molar tooth a patient had extreme facial pain. He was successively advised, in three different clinics, to submit to dorsocervical sympathectomy, to intracranial section of the ninth nerve, and to section of the posterior root of the fifth nerve. His trouble was promptly relieved by appropriate dental treatment. The case also illustrates how pain in another branch of the fifth nerve, and even in the ninth nerve, can be produced by irritation of the auriculotemporal nerve.



"Diagram of mesial view of mandibular nerve showing auriculo-temporal nerve and its connections with the otic ganglion." (After Spalteholz) From Costen, James B.: A Syndrome of Ear and Sinus Symptoms Dependent upon Disturbed Function of the Temporomandibular Joint, Ann. Otol., Rhin. & Laryng., 63:9, March, 1934.

Irritation of the auriculotemporal nerve can produce pain in other branches of the mandibular division of the fifth nerve. The lingual nerve, which supplies the anterior portion of the tongue, is an illustration, though glossodynia, or pain in the tongue, is not necessarily neurological in origin. It may be associated with a wide variety of conditions, including dental states and temporo-



"Sketch showing the distribution of the mandibular nerve and the course of the auriculo-temporal nerve." (Henle) From Costen, James B.: A Syndrome of Ear and Sinus Symptoms Dependent upon Disturbed Function of the Temporomandibular Joint, Ann. Otol., Rhin. & Laryng., 63: 9, March, 1934.

mandibular joint disease. Various pathological changes are observed, such as fibrosis of the periarticular tissues, wide excursion of the condyles if the joint is greatly loosened, and erosion of the anterior surface of the condyle or of the articular eminence. The diagnosis is frequently made by roentgenologic examination. If attacks of pain, burning or prickling along the tongue are relieved by the correction of temporomandibular disease or by the use of small cork disks between the molars, the non-neurological character of the symptoms is clear. Permanent reposition of the joint can be effected by increasing the vertical dimension and thus allowing the teeth to push the jaw down.

Goodfriend,[6] in an exhaustive study of abnormalities of the temporomandibular joint, dwelt at length on the psychologic aspect, with particular reference to speech defects. This is an important consideration. Such defects may lead to marked personality changes through withdrawal, introspection, and the development of inferiority complexes because of social difficulties and the difficulties of carrying on competition for economic independence. Citing a large number of illustrative cases, Goodfriend pointed out that normal speech requires coordination of the muscles of the diaphragm, ribs, larynx, pharynx, palate, tongue and mandible, and suggested treatment of malocclusion and bite abnorm-

alities as an adjunct to speech training.

Malfunction of the temporomandibular joint has a clear association with neuralgia of the seventh and ninth nerves. Hunt,[7] in an exhaustive study of geniculate neuralgia of the seventh nerve, described the primary, the secondary and the reflex types and pointed out various possible association or reflex pathways. Sensory filaments pass from the geniculate ganglion through the trunk of the seventh nerve to the tympanum and the cutaneous area on the external ear. Connections exist between the geniculate system and the terminations of the auditory nerve in the internal ear. Fibers connect the geniculate ganglion with branches of the fifth nerve through the chorda tympani, and fibers of deep sensibility run to the face. The geniculate system through all of these pathways is brought into direct relationship with the internal and external ear. Pain in the geniculate herpetic zone of the external ear (the auricle, the posterior surface of the lobule, and the tip of the mastoid) and deep in the ear is therefore an important symptom of geniculate neuralgia. The deep facial pain which is sometimes present may be mistaken for trifacial neuralgia.

Glossopharyngeal (ninth nerve) neuralgia may be confused with trigeminal neuralgia because the pain is of the same severe, paroxysmal, lancinating type. The distribution, however, is different, the pain being referred to the region of the tonsil, the lateral pharynx and the base of the tongue, whence it radiates deep into the ear. A differential diagnostic test of considerable value is cocainization of the throat, which abolishes the pain of glossopharyngeal neuralgia but has no effect whatever upon trigeminal neuralgia.

Costen points out that a defective biting mechanism, by reflex irritation, may be an important causative agent in neuralgias about the face and head which arise from the fifth, seventh or ninth cranial nerves. When the mouth is closed, as in the act of swallowing, the mechanical factors are ideal for the irritation of both the auriculotemporal nerve and the chorda tympani, which is actually the sensory portion of the facial nerve and which ends in the same nucleus as the glossopharyngeal nerve.

Other writers have pointed out the possible connection between dental states and neurological and neuropsychiatric states. Patrick,[8] for instance, states that he has frequently seen facial palsy following extraction of teeth and subsequent alveolar infection. McNevin and Vaughn,[9] in an exhaustive review of the literature dealing with the relationship between oral infections and systemic disease, cited numerous fully authenticated cases in which diseases of the nervous system were caused by or associated with oral infections and were corrected by their proper treatment. According to these authors, improvement or actual cure followed the correction of oral pathology in cases of meningitis, encephalitis, encephalitis lethargica, myelitis, brain abscess, herpes zoster, anterior poliomyelitis, multiple sclerosis, all types of neuralgia, various neuritides from the upper to the lower limits of the neuraxis, facial paralysis, hemiplegia, convulsions, epilepsy, migraine, chorea, tics of various kinds, stammering, dysphagia, catalepsy, and various forms of hysteria.

In many of these conditions, as, for example, poliomyelitis, dental infection is not advanced as the cause of the disease but merely as an associated focus of infection, the eradication of which is likely to be helpful. Instances of neurosis and even of major psychosis relieved by appropriate oral hygiene are almost as numerous as organic cases, though psychiatrists are far from unanimous in their emphasis upon the importance of oral pathology in their branch of medicine. They strongly advocate, however, as part of the therapy in every case, the correction of whatever oral defects may exist.

As a matter of interest, it might be mentioned in conclusion that there is nothing new in the suggested relationship between oral and dental pathologic states and neuropsychiatric states. As McNevin and Vaughn point out, as early as 1544 fainting spells and epileptic fits were attributed to the teeth. In 1803 Benjamin Rush associated defective teeth with insanity, headache and vertigo, and suggested their therapeutic extraction. The French and English writers of the nineteenth century followed their advice, and it would be well for modern neurologists and psychiatrists at least to take cognizance of the possible dental and oral basis of certain neuropsychiatric states.

Case Reports

A few personal observations may be cited to illustrate the association:

Case 1—A white male, 32 years of age, complained of severe right-sided frontal headache and nasal blockage which had been present for 10 years and had been so severe for the past three years as to prevent him from doing any work. His condition had variously been diagnosed as low blood pressure, neuralgia and dental sepsis. Three years before he was first seen all his teeth had been extracted, without relief. He denied venereal infection, and the only point of interest in the history, aside from the local condition, was the fact that his father and an uncle had died of brain tumor.

Examination showed a deviated nasal septum, for which submucous resection was done, and an error of vision, for which glasses were fitted. Relief was only temporary and the headaches were shortly as severe as they had been originally. A second roentgenologic examination showed a clouded frontal sinus, which was treated first conservatively and then by operation, again with only temporary relief.

Roentgenologic studies of the sinus had showed an unerupted right upper incisor, and dental consultation was finally requested. The dentist injected novocaine about the unerupted tooth, with instant relief of the headache. Relief was permanent after the tooth was extracted, and the patient shortly returned to his former state of good health.

The lesson of this case is obvious. A young man had suffered to the point of incapacity for 10 years, he had been seen by many physicians and had had many kinds of treatment, including several operations and the extraction of all his teeth, without relief. Yet the simple removal of an unerupted tooth, which had been revealed by roentgenologic examination for another purpose, from a mouth from which all teeth had supposedly been removed, gave him instant and lasting relief.

Case 2—A white male, 45 years of age, had complained for two years of extreme pain in the right eye and over the right side of the head. The pain was intermittent, and at first there were intervals of relief for weeks or even months. It was paroxysmal in character and was limited to the distribution of the first division of the fifth nerve. The various physicians who had seen the patient had unhesitatingly made the diagnosis of trigeminal neuralgia. Although the attacks were increasing in frequency and severity when the patient was first seen, the pain was relieved permanently by simple correction of the bite.

Case 3—A white male, 30 years of age, complained of headache, pain and swelling about the left eye, of 18 days duration. Three weeks before admission he had had an upper left molar extracted. The following day, while on a hunting trip, there was a sudden sharp drop in temperature, and he returned home the third day after the extraction with severe pain about the left eye and in the left side of the face. The face and the tissues about the eye soon became markedly swollen and inflamed. Considerable relief was obtained by multiple incisions, through which large quantities of pus were evacuated. A week before his admission to the hospital the pain and swelling recurred, and he entered the hospital with an orbital cellulitis.

Roentgenologic examination showed infection of all the sinuses and of the frontal bone. An orbital abscess was drained, as were the sinuses, and the greater portion of both the frontal and the temporal bone was removed. Improvement was marked, but of short duration. Roentgenologic examination showed an osteomyelitis extending far back into the parietal bones, and in spite of removal of the remaining portions of the frontal and temporal bones and of the major portion of both parietal bones, the course was steadily downhill to death.

Case 4—A white female, 28 years of age, had had pain in the back of the neck and in the region of the ears for two years. Various treatments had been without effect. Complete relief was secured by the constant use of a prosthesis, the pain recurring promptly whenever it was omitted for a few days.

Case 5—A white female, 33 years of age, entered Charity Hospital of Louisiana at New Orleans with a painful, swollen eye, following the extraction of two upper left molars 12 days before. The day following the extraction her mouth and throat were swollen and painful, and a peritonsillar abscess had been drained the day before her admission to the

hospital. Her course was progressively downhill and she died on the fifth day of hospitalization. Autopsy showed thrombosis and suppuration of both cavernous sinuses, and quantities of pus surrounded the pituitary body and both optic nerves.

Case 6—A white girl, five years of age, was admitted to Charity Hospital in an unconscious state. Two weeks before she had developed a toothache, with fever and considerable inflammation of the jaw. The tooth was extracted, with prompt relief of the toothache. Four or five days after the extraction the child began to vomit, and soon became unconscious. The day before she entered the hospital a left-sided paralysis was noted. She died two days after admission. Autopsy showed a thick yellow exudate about the base of the brain and a softening of the basal nuclei on the right and in the region of the internal capsule, apparently by an embolus.

Summary

1) Attention is called to the possible dental and oral basis of certain neurological and psychiatric states.

2) Malocclusion and abnormalities of the temporomandibular joint are actually responsible for many cases of supposed neuralgia, while various neuralgias are actually responsible for many cases of supposed dental disease.

3) Correction of dental and oral states is frequently of value in neuropsychiatric disease even if they are not the sole cause of the symptoms.

4) Illustrative cases are cited.

3431 Prytania.

References

1 Costen, J. B.: "A Syndrome of Ear and Sinus Symptoms Dependent upon Disturbed Function of the Temporomandibular Joint," *Ann. Otol., Rhin., & Laryngol.*, 43: 1, 1934.
2 Costen, J. B.: "Glossodynia: Reflex Irritation from the Mandibular Joint as the Principal Etiological Factor," *Arch. Otolaryn.*, 22: 554, 1935.
3 Costen, J. B.: "Neuralgias and Ear Symptoms Associated with Disturbed Function of the Temporomandibular Joint," *Tr. Sect. Laryng., Otol. & Rhin., A.M.A.*, pp. 72-83, 1936.
4 Costen, J. B.: "Neuralgias and Ear Symptoms Associated with Disturbed Function of the Temporomandibular Joint," *J.A.M.A.*, 107: 252, 1936.
5 Klemme, R. M.: Cited by Costen.
6 Goodfriend, D. J.: "Symptomatology and Treatment of Abnormalities of the Mandibular Articulation," *Dent. Cosmos*, 75: 9-11, 1933.
7 Hunt, J. R.: "Geniculate Neuralgia (Neuralgia of the Nervus Facialis): A Further Contribution to the Sensory System of the Facial Nerve and its Neuralgic Conditions," *Arch. Neurol. & Psych.*, 37: 253, 1937.
8 Patrick, H. T.: "Facial Diplegia in Multiple Neuritis," *J. Nerv. & Ment. Dis.*, 44: 322, 1916.
9 MacNevin, H. G. and Vaughn, H. S.: *Mouth Infections and Their Relation to Systemic Diseases*, Joseph Purcell Research Memorial Fund, New York, 1933.

The Treatment of Craniocerebral Injuries

JAMES GREENWOOD, JR., M.D., F.A.C.S.
Houston, Texas

Dr. Greenwood graduated from the University of Texas School of Medicine in 1931. He is a Fellow of the American College of Surgeons and a member of the American Psychiatric Association. Dr. Greenwood is Chairman of the Neurosurgical Staff at the Jefferson Davis, Methodist, and Herman Hospitals. He is also on the Neurosurgical Staff of St. Joseph's Infirmary and is Consulting Neurosurgeon to the Southern Pacific Railroad.

So much has been written in the past ten years with regard to the treatment of head injuries and with such diversity of thought and method that now sufficient material may be accumulated to make better standardization of methods possible. Sufficient time has also elapsed so that the proponents and opponents of certain points in question should now have these points finally settled. Some of the main points in controversy such as dehydration, the use of intravenous hypertonic solutions (and which ones to use), spinal puncture (when, whether or not at all), elevation of the head, etc., have worked themselves out, and one can say fairly definitely and with well done clinical studies and reports to back him up—just what are the advantages of certain procedures in the treatment of craniocerebral injuries, when they are indicated and when contra-indicated.

The treatment of this group of conditions has gained much not only from the conservative views of Dandy,[1] but from the somewhat radical dehydration methods with frequent spinal punctures advocated by Temple Fay.[2] Munro's recent book[3] is unquestionably the

most thorough treatise on the subject and is the outcome of a considerable amount of clinical work.

With a greater number of clinical reports to guide us we can treat the head injury case much more intelligently and can stray from the conservative when we are sure of our ground. It is, however, still excellent judgment, whenever in doubt, to err definitely on the side of conservatism. DeLee in his chapter on operative obstetrics early emphasizes a warning which was frequently printed in large letters in the labor room of the older accoucheurs: "Primum non nocere" (First no harm). This warning may be applied almost equally well to the treatment of head injuries. They (like obstetrical patients) will recover in a large percentage of cases if left alone. It thus becomes paramount when we consider any procedure in the management of these conditions such as spinal puncture, x-ray, etc., that "first we do no harm."

Probably 70 per cent of all cases will recover if we merely take care of the essential body needs. In this group we may speed recovery and greatly lessen post-traumatic symptoms. In some of the remaining 30 per cent, treatment may be life saving. Of this group only 7 per cent or less will be operated upon. About 12 to 15 per cent of the total will die.

In our discussion we shall follow to some extent the outline of treatment which we have attempted to use at the Jefferson Davis Hospital. We believe that there are largely two main types of injury: (1) Contusion of the brain (with resultant shock and edema); and (2) Subarachnoid hemorrhage. Some patients have both types of injury but, in most, one type predominates. Thus if we see a patient who has a history of a relatively mild injury, with little contusion of the scalp or depression of bone, rigid neck, deeply stuporous or unconscious we can usually expect to find much blood in the fluid, a high pressure and a large volume of fluid. If on the other hand, the injury is quite severe, depressed fracture, or severely contused scalp and not much rigidity of the neck, this patient will usually have little blood in the fluid, small volume of fluid (if we are foolish enough to drain it dry) and considerable brain edema. This is the only type of case in which there is danger from spinal puncture.

The group which develop a subdural or epidural hematoma comprise less than 7 per cent of the total.

We have elected to divide the actual items of treatment as follows: (1) Immediate treatment including treatment of patient in shock; (2) Hospital treatment; (3) Special observations including diagnosis of localized hematoma—epidural or subdural.

Treatment of Patient in Shock

(Deep coma, Temperature subnormal, pulse feeble and rapid).

1) Admit to hospital room with as little delay in the emergency room as possible. Do not get an x-ray.

2) The head should be lowered or the feet elevated and the head turned to the side so that the tongue will not interfere with respirations.

3) 1000 c.c. of saline with 5 per cent glucose should be given by hypodermoclysis. We believe that this is preferable to overloading the circulation too quickly by the intravenous route.

4) Cover the patient well with blankets and place 4 or 5 hot water bottles to warm the patient. Remove when temperature reaches normal.

5) Take temperature every 30 minutes and pulse and respirations every 10 or 15 minutes.

6) Oxygen is indicated for cyanosis or shallow, slow, respirations.

7) Transfusions should be given if there has been loss of blood. It is well to remember that escaping blood from an anterior fossa fracture may be swallowed in large amounts.

Emergency Treatment of Craniocerebral Injuries (not in shock)

1) All patients not mentally clear (confused, stuporous, semicomatose or comatose) should be admitted to the hospital at least overnight.

2) When a patient is not admitted for hospital care the relatives should be warned of the possibility of a hematoma and ensuing dangerous coma so that he may be roused several times during the night.

3) Scalp wounds should have their edges shaved and cleaned thoroughly with green soap and water, iodine 2 per cent and alcohol. We believe that some of the newer mercury antiseptics are superior to iodine. The anti-

septic solution should be poured into the open wound. Dead and devitalized tissue, fragments of bone, etc., should be removed cleanly and the wound sutured without drainage. A small rubber tissue drain should be used only in the very unclean case. In the severe lacerations this will be an operating room procedure.

4) Do not get an x-ray unless the patient is in excellent condition.

5) Antitetanic serum is given in all cases where the wound is deep or known to be unclean or to have been in contact with the ground.

6) Examine the patient carefully for other injuries.

Hospital Treatment

No routine method of treatment can possibly be followed blindly with the expectancy of achieving any real results. Each patient is a law unto himself and needs an expert to decide when and when not to administer the methods of treatment at our disposal. No stereotyped form of treatment can be made to conform to these cases and nothing can replace the specialist who has a thorough understanding of the anatomy, normal physiology and what is happening to these factors under the superimposed abnormal situation; the increasing edema of the brain, the subarachnoid hemorrhage, the gradually collecting subdural clot, the potentiality of infection from a fracture through one of the air sinuses and innumerable other things which must be anticipated and prevented or treated as the need arises.

Nevertheless certain factors do become routine and the following outline has been found to be useful.

1) *Pulse and respirations* are recorded every 15 minutes and temperature per rectum is taken every half hour as long as the patient is in coma or shock. When he begins to respond fairly well these may be taken only half as frequently. The blood pressure records have been disappointing to us because they usually give us only information which is already too well known.

2) *For temperature* above 102 degrees by rectum sponging with cool water is carried out. If this method is ineffective, sufficient ice bags (as many as 10 or 12 if necessary) are placed along the patient's body, under the arms, etc. The body is uncovered as much as possible, ice water enemas may be employed and fairly large doses of sodium salicylate, gr. xx-xxx by rectum, may be used to keep the temperature down. In these cases we do not have a useful temperature, one to mobilize the body forces against some infection, but a disorder of the heat producing mechanism which may well cause the body to burn up and exhaust itself in needless effort. Once the temperature does reach 105 degrees recovery is almost unknown and the temperature usually continues to rise. Every effort must be made to keep it at a safe level. The danger of "catching cold," etc., from our energetic cooling methods is a small danger alongside the certain death which comes with hyperthermia.

3) *Position of the patient* should be such that he can breathe easily and so that he will not drown in his own secretions. The latter situation will not occur in the patient who is responding, who has a swallowing reflex and who is able to cough. It will occur in the patient who is in deep coma or in shock. Secretions which form in the lungs will not be coughed up, saliva will run into the trachea and a pseudo—pulmonary edema, which is simply drowning, will result. This patient should be placed three quarters over on his face, head turned to the side and head down. The patient who is only semicomatose may have his head moderately elevated and turned to the side and brain edema will be lessened by the improved lymph (cistern) and venous drainage.

4) *The State of Consciousness*—coma, semicoma, stupor should be recorded hourly by the nurse. This is particularly important in patients admitted in a conscious or stuporous condition late in the afternoon or early evening. During sleep these people become excellent candidates for a dangerous situation from subdural or epidural hemorrhage which may progress to a critical or fatal point during the night. Head injury cases should be roused (not wakened) at least every two hours during the first night.

5) *Catheterize* every eight hours if necessary.

6) *Morphine* is never given under any circumstances. Besides being a respiratory depressant and masking symptoms it definitely increases intracranial pressure. A recent article by Gurdjian, Webster and Sprunk[4]

proves this very well.

7) *For restlessness* codeine sulphate, gr. ½ by hypodermic, paraldehyde by rectum, or one of the soluble barbiturates may be given.

8) *Cyanosis or Cheyne-Stokes'* respirations are dangerous and often terminal factors. Oxygen is indicated.

9) *X-rays* are not taken as a rule until the patient is in excellent condition and are usually of medico-legal interest only. They should always be taken before the patient is discharged from the hospital.

There are certain exceptions to the above rule. They may be taken in an ill patient to search for shift of the pineal gland when a localized hematoma, subdural or epidural, is suspected; or to show a fracture across the middle meningeal artery. They may be taken in a patient having one sided convulsions where there is definite external evidence of a depressed fracture.

10) *Depressed fractures* are almost never emergencies and will wait until condition of the patient permits their treatment by surgery.

11) *Spinal Puncture and Dehydration* — Before going into the question of the limitation of fluids, the use of dehydrating solutions given intravenously or per rectum and the use of spinal puncture it might be well to review the pathological anatomy of craniocerebral injuries.

First of all, the foremost anatomical factor which makes craniocerebral injuries so different from injuries elsewhere in the body must be understood. This factor is the complete enclosure of the brain, blood vessels and cerebrospinal fluid pathways in a rigid, closely approximated cage which allows no room of itself for variations in fluid or brain volume contained within. Thus, if the fluid or blood is increased, it must be at the expense of brain and if the brain swells by edema it must be at the expense of fluid or blood or both.

We believe, as we mentioned before, that there are only two main types of craniocerebral injury:

1) Contusion or laceration of the brain with resultant shock and cerebral edema.

2) Subarachnoid hemorrhage or generalized hemorrhage into the subarachnoid space.

Localized hemorrhage, subdural or epidural, comprise less than 7 per cent of the total.

Most patients have one of the first two types of injury. Some have both types, but in most one or the other predominates.

Spinal Puncture

If we see a patient who has a history of a relatively light blow, with very little contusion of the scalp, no extensive bone depression, very rigid neck, and is deeply stuporous or comatose, we can usually expect to find in the fluid much blood, under considerable pressure and a *large volume* of fluid which may be withdrawn. Sometimes 20-50 c.c. of bloody fluid may be allowed to drain off before the pressure is lowered to one half of its initial high value. This patient is suffering mostly from his subarachnoid bleeding (See Figure 1). Spinal

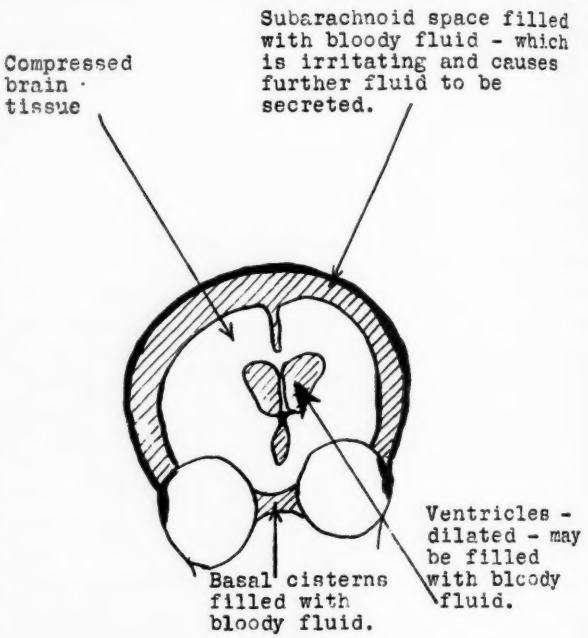

Compressed brain tissue
Subarachnoid space filled with bloody fluid - which is irritating and causes further fluid to be secreted.
Ventricles - dilated - may be filled with bloody fluid.
Basal cisterns filled with bloody fluid.

FIGURE 1

Diagrammatic Illustration of the Pathological Anatomy produced by subarachnoid hemorrhage. Spinal drainage is indicated here. Dehydration is probably not of great value.

puncture here will produce immediate improvement if repeated every 12 to 24 hours. An ancient argument is advanced with respect to this procedure that draining off of the fluid encourages further bleeding. It can, however, in no way increase bleeding—if the pressure is not reduced below 10-15 mm. of mercury. This is well above venous pressure and if the bleeding is arterial and of the order of 100 mm. or over it cannot possibly be controlled by any amount of increased

intracranial pressure anyway. The old belief that spinal puncture can increase bleeding can be discarded; it simply cannot do it.

If on the other hand the blow is known to have been a severe one, if the scalp or face is severely contused, or there is definite bone depression of rather extensive proportions, and little rigidity of the neck (no irritation of the meninges) most of the damage can be assumed to be due to cerebral edema. If a spinal puncture is done the pressure falls quickly after the removal of only 5 to 10 cc. of fluid or less and if we are foolish enough to drain the canal dry we may find that only 5 cc. or so can be obtained. While little harm can be done in this case by reducing the pressure to one-half of its original value, it will be found that little benefit accrues. Spinal drainage should be done less frequently in these cases until the brain volume decreases. Great harm may be done where there is severe cerebral edema by draining the canal dry or by using a large spinal needle (since the canal may be drained by leakage after its withdrawal). True foraminal herniation with respiratory death is certainly possible mechanically here, although Munro[3] states that in over 5000 spinal punctures there was no harm that could be attributed to the procedure.

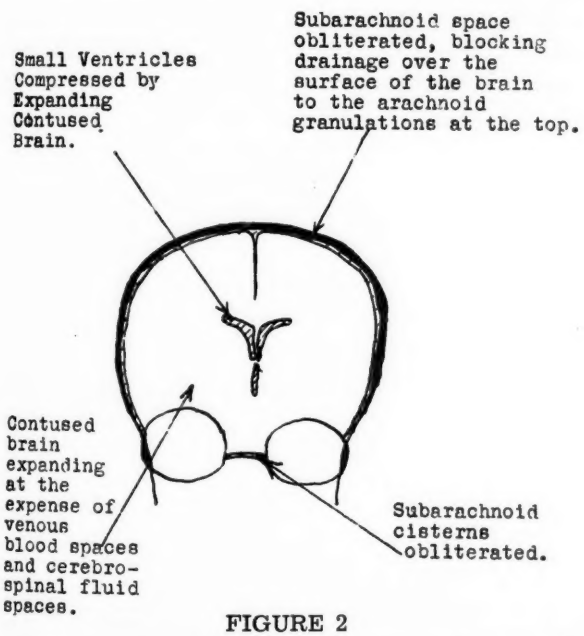

Small Ventricles Compressed by Expanding Contused Brain.
Subarachnoid space obliterated, blocking drainage over the surface of the brain to the arachnoid granulations at the top.
Contused brain expanding at the expense of venous blood spaces and cerebro-spinal fluid spaces.
Subarachnoid cisterns obliterated.

FIGURE 2

Diagrammatic illustration of Anatomical situation produced by cerebral edema.

Spinal drainage may be dangerous if the edema is massive although pressure on the medulla will likely occur regardless of whether spinal drainage is done or not. Spinal drainage will be helpful if the edema is not too marked.

Dehydration is of marked value here since it reduces brain volume.

It is good judgment to avoid the use of spinal puncture in patients in shock, or those desperately ill and known to have massive cerebral edema. It can do little good and while it is probable that the puncture correctly done does no harm, the maneuvering of the patient may do considerable. Spinal puncture finds its greatest use where the main pathology is subarachnoid bleeding or increase in fluid pressure.

Dehydration

It is probably better to direct our methods of dehydration towards the elimination of fluids rather than the restriction of fluids. Restriction cannot be carried much lower than 1000 cc. in 24 hours without some danger from this factor alone. We feel it is much safer to give 1250-1500 cc. by hypodermoclysis if necessary, and it is well to add glucose to 2½ per cent for nourishment.

Dehydration may be accomplished by several methods and the easiest is the use of sucrose or glucose 50 to 100 cc. of 50 per cent by vein being given every 4 to 8 hours as needed. Glucose may be given when the edema is moderate and has the advantage of being less expensive than sucrose. It also has food value. Sucrose is, however, more powerful and has a definite place. Magnesium sulphate may be given by retention enema in 4 oz. amounts. The effectiveness of these agents is evident to those who use them. While it is true that there is probably some bad after effect, it is nullified to a great extent by the diuresis with elimination of fluid and the hypertonic element from the blood stream which prevents that fluid from being available in the production of any after coming cerebral edema which might take place when the hypertonic solution enters the brain tissue itself.

A check of the blood urea every 24 to 48 hours is useful in determining whether dehydration is being carried too far. As long as the kidneys are able to eliminate urea and keep the blood level normal, then the concentration and osmotic pressure of the blood has not reached a dangerous point.

Dehydration finds its greatest use where the greatest damage is due to cerebral edema. In mixed cases where there is evidence that

both subarachnoid hemorrhage and cerebral edema play a part, dehydration and spinal puncture should both be used. Indeed it is safer to use both methods in most cases to some extent, avoiding puncture where the pressure drops quickly after the removal of only a small volume of fluid and using only mild dehydration methods where there is obviously no great amount of cerebral edema.

Epidural and Subdural Hematoma—There is no attempt to differentiate between these two conditions and no need since the treatment of both is immediate surgery. The subdural localized hemorrhage is more likely to be slow and even chronic while those of the epidural type may be exceedingly quick. Close observation is necessary in both for the patient may pass rapidly into coma and in several hours arrive at a point where surgery can do no good.

The key to the diagnosis is the presence of a *lucid interval.* There may be unconsciousness at the time of injury, recovery and a second lapse into coma or there may be no initial unconsciousness, but the patient pass into coma after a relatively mild injury. In either case, the lucid interval is absolute evidence of what is going on. A relatively light stupor in which the patient responds a little may take the place of the lucid interval and also may be sure evidence of a localized hematoma when followed by rapidly deepening coma. Any lucid interval followed by coma is always justification for at least bilateral burr openings. The presence of paralysis, dilated pupil on one or both sides, and one-sided twitchings or convulsions, valuable signs when they are present, are too inconstant to be of anything but occasional use. The treatment of localized hemorrhage is of course always surgical.

Such a routine as we have just outlined can never hope to supplant the individual treatment of these cases by the experienced neurosurgeon. It can, however, serve as a guide in the treatment of these cases and act as a nucleus from which further studies can proceed.

Convalescent Treatment—The care of the patient convalescing from a head injury is a subject for a complete paper in itself. Nevertheless, a few things should be emphasized. The patient should be encouraged from the beginning to avoid, if possible, any neurotic tendencies. He should avoid any heavy exercise although light exercise within limits should be encouraged when his condition permits. He should avoid becoming overheated and keep out of the hot sun.

Spinal punctures may be done for weeks, but at less frequent intervals. We may be guided by the pressure and by the relief of symptoms from puncture. Puncture will produce almost instantaneous relief of headache where the pressure is high. Usually one tap a week or less will be sufficient.

We have a definite fear of allowing the pressure to remain high for any extended period and feel that pressure itself produces more pressure due to the fact that there is valve action produced by the cortex being forced out against the dura thus obliterating the subarachnoid space, interfering further with drainage and probably fostering the formation of adhesions.

In the past ten years we have passed from the radical age of many operations through a period of ultraconservatism and now the pendulum is again back to the point where we are doing much more for these cases. The treatment now, while no longer ultra conservative, must remain conservative and on a reasonable basis.

If we use a procedure or diagnostic test in the care of craniocerebral injuries we should be sure that we understand just why we are employing it and what we are to gain. Even more important we must be doubly sure that our treatment itself does no harm for 70 per cent or more will get well if managed by the old "hands off" policy. The watchword here as in obstetrics may well be "Primum non nocere."

518 Medical Arts Bldg.

References

1 Dandy, Walter E.: "Diagnosis and Treatment of Head Injuries," *J. A. M. A., 101:* 733, 1933.

2 Fay, Temple: "The Treatment of Acute and Chronic Cases of Cerebral Trauma by Methods of Dehydration," *Annals of Surgery, 101, 1:* 76, (January) 1935.

3 Munro, Donald: *Craniocerebral Injuries,* Oxford University Press, 1938.

4 Gurdjian, E. S.; Webster, John E. and Sprunk, Carl J.: "Studies of the Spinal Fluid in Cases of Injury to the Head," *Arch. of Neur. and Psych., 42, 1:* 92, (July) 1939.

5 Munro, Donald: "The Diagnosis, Treatment and Immediate Prognosis of Cerebral Trauma," *New Eng. Jour. of Med., 210, 6:* 287, (Feb.) 1934.

Therapy of Late Syphilis*

WALTER H. SQUIRES, M.D. *and* S. A. MOLLE, M.D.
Eloise, Michigan

Dr. Squires graduated from the University of Vermont in 1917. Following his interneship at Mary Fletcher Hospital in Burlington, he served two years in the Medical Corps, U.S.A., as Captain. After his discharge from the army, he entered psychiatric work at Eloise Hospital in 1920. In 1930, he took postgraduate work in psychiatry at the University of Michigan. Since 1936, he has been Senior Psychiatrist in charge of the Male Division at Eloise Hospital. He is a member of the American Psychiatric Association and the Michigan Society of Neurology and Psychiatry.

Dr. Molle graduated from Wayne College of Medicine in 1936. He served his interneship at William J. Seymour Hospital in Eloise, which was followed by a two and one-half year's residency in neurology and psychiatry at Eloise Hospital. In 1940, he took postgraduate work in neurology and psychiatry at the University of Michigan. He is a member of the American Psychiatric Association and the Michigan Society of Neurology and Psychiatry. At present, he is practicing neurology and psychiatry in Toledo, Ohio.

Syphilis, in reality a septicemia, is a chronic infectious, constitutional disease classed as venereal. It may be conveniently further classified as early and late.

We will consider the treatment of late syphilis as the treatment of any syphilitic complication occurring five years or more after the initial lesion. We find the greatest incidence of degenerative and destructive lesions in the late syphilitic stages. The most important step in the treatment of late syphilis is accurate diagnosis. We wish to emphasize the necessity of spinal fluid examination in any patient coming to your office with a history of syphilis. A patient with inadequate treatment is more prone to neurosyphilitic involvement than one with adequate or no treatment. A cerebrospinal fluid examination should be done on the patient that comes to you with positive blood serology, but no history of initial infection or treatment.

It has been shown that twenty to thirty per cent of males and thirty-five to sixty per cent of females with late syphilis have no history of initial syphilitic infection; they are examples of symptomless infections. It is, therefore, imperative, in order to discover these cases as early as possible, to perform routine blood Kahn or Kline tests on all patients coming to your office. Any patient exhibiting positive serology should have a spinal fluid examination. In this way it will be possible to use adequate, continuous treatment in the indicated cases. Moore and his coworkers have shown that a negative cerebrospinal fluid present in syphilitics five years or more after the initial infection, whether or not the patient has received any anti-luetic therapy, is almost positive proof that these individuals will not develop malignant parenchymatous neurosyphilis, specifically syphilitic meningo-encephalitis or tabes dorsalis. The two most serious complications of syphilis frequently resulting in death are cardiovascular and neurosyphilis.

Late syphilis may be conveniently divided into the following groups: (1) latency, (2) neurosyphilis, (3) cardiovascular, (4) visceral, and (5) benign, late syphilis. In addition we will briefly discuss congenital syphilis and syphilis associated with pregnancy.

Latent syphilis is syphilis associated with a positive blood Kahn or Kline test, a negative spinal fluid, and no physical evidence of disease. It is divided into two classifications—early and late latency. It is sometimes questionable whether a latent syphilitic should or should not be treated. Untreated latent syphilitics eventually develop neurosyphilis in one to two per cent of the cases; cardiovascular syphilis in ten to fifteen per cent; skin, mucosal and osseous syphilis in ten to fifteen per cent; twenty-five to thirty-five per cent remaining latent; and a similar percentage, twenty-five to thirty-five, eventually being classified as spontaneously cured. One out of three patients coming to the practitioner with syphilis usually has what can be classified as latent syphilis. At the Johns Hopkins syphilitic clinic, forty-three per cent of all patients with latent syphilis could give no history of infection.

Many syphilologists have shown that it usually takes four to five years for a syphilitic individual to develop his full spontaneous immunological resistance to the disease. All latent syphilitics should be subjected to careful physical examination, fluoroscopies, x-ray of the heart, cerebrospinal fluid and opthal-

* Delivered April 24, 1940, at the *Post Graduate Clinic for General Practitioners,* Eloise Hospital, Eloise, Michigan.

mological examinations to discover any underlying active organic syphilitic involvement. If such involvement is discovered, the patient can no longer be classified as latent syphilis. We can again emphasize that in latent syphilis the only positive syphilitic finding is a positive blood Kahn or Kline test.

Treatment in latent syphilis will frequently depend on the age of the patient. Stokes and Moore have arbitrarily stated that, if a patient is fifty years of age or over and has what we call latent syphilis, anti-luetic therapy is frequently not necessary. Individuals in the productive period of life, such as the twenties, thirties, or forties, with latent syphilis, should be given alternating courses of neoarsphenamin, or some other arsenical compound, and heavy metals particularly bismuth. Continuous, regular, persistent treatment is indicated in all cases of early latency, that is, individuals who have had the syphilitic infection five years or less. Continuous treatment is not essential in late latency, that is, individuals whose infection is five years or more in duration. In such patients the courses of arsenicals and bismuth may be interspersed with rest periods. Treatment should be continuous for at least two years or until the serology is negative and has remained so for one year. Under such a regime, severe complications from latent syphilis can be reduced from twenty-five or thirty per cent to only five per cent. The object in the treatment of latency is not to produce a cure, but rather to bring about clinical arrest of the syphilitic process and to prevent infection of others.

Cardiovascular syphilis is syphilis of the aorta, asymptomatic or symptomatic, and its surrounding associated structures. Brunsgaard and Turner working separately have found that ten per cent of untreated syphilitics eventually develop cardiovascular involvement. Beckman placed the figure as high as forty-five per cent. The tragic feature of the problem is that cardiovascular syphilis is actually preventable. The incidence of cardiovascular involvement may be reduced to as low as four per cent with adequate continuous therapy in early syphilitics. This form of syphilitic complication is serious and with neurosyphilis is the most frequent cause of death from acquired syphilis.

White reported that, in a large group of patients with heart disease in New England, four per cent had cardiovascular syphilis. The incidence is much higher among colored cardiac patients. The figures range between twenty-five and thirty-two per cent.

Syphilitic heart disease always begins as an aortitis. It may or may not produce symptoms such as anginal attacks, substernal pain, or paroxysmal dyspnoea and may, by extension, produce one or more of the following serious death producing complications—aneurysm, aortic regurgitation, and coronary ostial involvement.

The diagnosis in the early stages is difficult. Individuals under the age of fifty with late syphilis, whether or not the blood is positive, and with no evidence of arteriosclerosis, other forms of cardiac disease, or hypertension, should be considered as strong candidates for the diagnosis of cardiovascular syphilis if three of the following criteria are present: (1) aortic dilatation as evidenced by fluoroscopies and x-rays; (2) increased retromanubrial dullness; (3) history of circulatory difficulties; (4) tympanitic bell-like tambour accentuation of the second aortic sound; (5) progressive cardiac failure; (6) substernal pain; and (7) paroxysmal dyspnoea. In addition, some patients present a visible or palpable pulsation in the episternal notch and a rough systolic murmur in the aortic area.

There is no evidence to prove that modern treatment of early syphilis has increased the incidence of syphilitic aortitis. Ninety per cent of patients with cardiovascular syphilis give no history of previous anti-luetic treatment. Moore reports he has never seen a patient develop cardiovascular syphilis after receiving as many as twenty-four arsenical injections for early syphilis. It is, therefore, true that cardiovascular syphilis may be expected to develop in inverse ratio to the amount of treatment given for early syphilis.

The aims of treatment in cardiovascular syphilis are not radical cures or restitution of damaged vascular structures which, of course, is impossible, but rather, the relief of distressing symptoms and prolongation of life beyond the average duration to be expected, had no treatment been given. It is not justifiable to withhold treatment from patients with cardiovascular syphilis even when life for the patient seems hopeless.

Treatment, on the other hand, must be adjusted so as to cause no harm to the patient.

The principles of treatment of cardiovascular syphilis may be summarized as follows: (1) clinical evaluation of the location and extent of the anatomical damage; (2) rest; (3) restriction of physical activity; (4) digitalis when necessary for cardiac failure; and (5) specific treatment.

Treatment in this form of syphilis, as in all forms, must be individualized and will, of course, depend on the diagnosis. One cannot be dogmatic concerning specific therapy. In general, it may be said that uncomplicated syphilitic aortitis should be at first treated for at least ten to twelve weeks with weekly injections of a heavy metal such as bismuth salicylate, 0.2 of a gram intramuscularly, and potassium iodide orally, 30 to 60 grains three times daily. This prevents the possibility of too rapid healing with the resultant edema and death from coronary occlusion, and diminishes greatly the hazard of a therapeutic shock or Herxheimer reaction. After this preparatory period, neoarsphenamin may be utilized at weekly intervals for eight to ten weeks using small doses 0.1 of a gram for the first injection, 0.2 for the second and so on, and it is probably best not to exceed 0.6 of a gram at any one time. This therapy is continued, unless complications arise, with alternating courses of weekly intramuscular bismuth and daily oral iodides for twelve weeks following the weekly injections of neoarsphenamin for eight to ten weeks until a period of two years has elapsed. Most syphilologists recommend no rest periods. During the course of treatment the cardiac apparatus must be examined at frequent intervals. Fluoroscopies and x-rays of the aortic width should be repeated and compared to previous studies. Bed rest and digitalis are not necessary unless cardiac failure is present. The urine should be examined at intervals to elicit any abnormal change or kidney damage that may result from the use of heavy metals. The serology may be disregarded. It is often resistently positive and, although the efficacy of treatment in early syphilis may be reflected in the change of the serology from positive to negative, no such change must necessarily be expected in the therapy of late syphilitics. On the other hand, fifteen per cent of cardiovascular syphilitics have negative serology. It is advisable to follow such patients for the remainder of their lives with yearly physical and x-ray studies, or perhaps by biannual examinations.

Complicated aortitis with aortic aneurism and compensated aortic regurgitation should be treated similarly to the cases with uncomplicated aortitis with the following exceptions: (1) never use arsphenamin, which is to be used in individuals with uncomplicated syphilitic aortitis; (2) use small doses of neoarsphenamin, never exceeding 0.3 of a gram; (3) restrict physical activity with, if possible, bed rest for three to four weeks as a desirable adjunct; (4) watch the patient carefully for impending cardiac failure—dyspnoea, edema and tachycardia.

If congestive heart failure complicates the cardiovascular syphilis, therapy is directed toward the heart failure with the use of bed rest, digitalis, restriction of fluids and salts, mercurial diuretics and morphine. In addition, one may use oral potassium iodide until the patient is compensated. Then, after due preparation with bismuth and iodides for twelve weeks or so, small doses of bismarsen or neoarsphenamin may be used. If congestive heart failure again intervenes, all active anti-luetic therapy must be discontinued except probably iodides or small doses of bismuth.

What can we expect from the treatment of cardiovascular syphilis? Symptomatic relief, that is relief from pain and paroxysmal dyspnoea has been reported in eighty-four per cent of the treated patients with uncomplicated aortitis. The results are not so good in aortitis complicated by aneurysm and regurgitation, but it may be stated that adequate therapy has reduced the mortality rate and increased the average duration of life. The average duration of life in untreated individuals with aortic aneurysm or regurgitation is nineteen and thirty months respectively; this may be prolonged by adequate treatment to seventy-five and sixty-four months respectively. Symptomatic relief has also been reported in more than ninety per cent of these latter.

Syphilitic heart disease in ten to thirty-five per cent of the cases is associated with neurosyphilis. Twenty to twenty-five per cent of syphilitic meningo-encephalitis and fifteen to fifty per cent of individuals with tabes

dorsalis have associated cardiovascular syphilis.

Benign late syphilis is defined as the allergic type with inflammatory (often gummatous) lesions involving bones (periostitis, osteomyelitis, osteitis, and arthritis), the muscles and tendons (gummas of muscles, synovitis), the skin and mucous membranes (late nodular syphilide, cutaneous or mucosal gummas) or the eye. These lesions rarely, if ever, kill the patient. They may, however, lead to serious incapacitation. Thorough studies of such individuals have disclosed that in twenty to twenty-five per cent of these cases the therapeutic problem is one of cardiovascular or neurosyphilis and that the benign late syphilitic manifestations are merely incidental.

Like other late manifestations of syphilis, the benign lesions seem to be preventable by adequate treatment of early syphilis. In a study of two hundred such cases by Moore, eighty-five per cent had no previous antiluetic therapy. Only 8.5 per cent had received previous arsenical therapy and only 2 per cent had a history of receiving as many as twelve injections of arsphenamin during the early syphilitic stages.

Therapy in this form of syphilis should be continuous, consisting of alternate courses of neoarsphenamin and bismuth and iodides for at least two years. Moore feels that the treatment may begin with the arsenicals, but to avoid any possible therapeutic complications, in the event of subclinical cardiovascular syphilis, it would probably be safer to begin therapy with heavy metals and iodides. During the last one or one and a half years of such therapy, it is suggested that alternating courses consisting of six doses of neoarsphenamin and ten to twelve of bismuth be used. As compared with early syphilis, these patients should receive relatively less arsenicals and more heavy metals. The spinal fluid should, of course, be examined previous to the institution of therapy, and, if positive, the plan of treatment may have to be modified. Serological and physical examinations should be done every six months. The serologic response may be disregarded. Wassermann fastness is the rule and is irreversibly positive in more than two-thirds of the cases. On the other hand, reversal of the Wassermann Kahn or Kline test is of little value as evidence of arrest or cure. The effect of therapy is evaluated much better by clinical than by serological standards.

Visceral symptomatic syphilis is uncommon. Any organ may be the seat of an active syphilitic infection, clinical or subclinical. The following have been infrequently described as exhibiting clinical evidence of syphilis: larynx, trachea, bronchi, lungs, mediastinum, stomach, liver, spleen, rectum, pancreas and kidneys. It is sufficient to say that the diagnosis is difficult and is frequently made only by the exclusion of other lesions by differential diagnosis, and by a favorable response to anti-luetic therapy. As a general rule, all of these conditions are treated after adequate preparation with bismuth and iodides for ten to sixteen weeks, by alternating courses of small doses of neoarsphenamin and bismuth and iodides. Treatment must be individualized and complicating factors avoided.

Congenital syphilis is preventable. It may be almost completely eradicated by the adoption of two simple procedures—(1) routine use of Kahn and Kline tests in all pregnant women, and (2) adequate early treatment of the syphilitic mother during pregnancy. Such adequate, early treatment with alternating, continuous courses of arsenicals and bismuth will result in over ninety per cent of the syphilitic women being delivered of apparently non-syphilitic babies. It might be stated that still-births occur four times as often among syphilitic as non-syphilitic women. One-tenth of all syphilitic children are born to mothers whose serology is negative during pregnancy. Pregnancy itself for some unknown reason appears to have a beneficial effect on the outcome of the infection and may in itself be a therapeutic measure enhancing the probability of an ultimate favorable outcome. The aim of vigorous treatment during pregnancy is prevention of infection of the fetus. After delivery, the mother's syphilis must be treated according to its manifestations. It is also suggested that anti-luetic therapy during pregnancy should begin and end with neoarsphenamin. Treatment should be given as soon as the diagnosis is made, for it has been shown that the incidence of syphilitic children is three times greater if treatment is delayed until after the fifth month of pregnancy.

The treatment of congenital syphilis depends on the type of lesion or lesions present. The treatment of early congenital syphilis is similar to early acquired syphilis, emphasis being placed on continuous, alternating treatment with arsenicals and bismuth; intravenous treatment may be difficult and, therefore, intramuscular preparations such as bismarsen and sulfarsphenamin may have to be used. Moore states that the arsenical preparation of choice is intramuscular sulfarsphenamin. Late congenital syphilis is treated in a similar fashion to late acquired syphilis, depending, of course, upon the various manifestations. The prognosis is not as good in these cases as in cases of acquired syphilis. Acetarsone or Stovarsol has been reported as giving fairly good results in congenital syphilis, but, although it has the advantage of oral administration, its exact value is not yet determined.

Neurosyphilis is an invasion of the brain or spinal cord by the luetic infection. This invasion may occur early or late in relation to the initial lesion.

Volumes have been written on the subject and as O'Leary says, "Treatment of central nervous system syphilis is still in the developmental stage."

There is a classification of the types of neurosyphilis, adopted by the committee on non-specific therapy of neurosyphilis, which is perhaps the most understandable of any in present use. Unfortunately, we frequently find cases having symptoms falling into two classified groups and here the preponderance of symptomatology must determine the diagnosis and subsequent treatment. These types are: (1) asymptomatic, (2) neurorecurrence, (3) meningeal, (4) vascular, (5) meningovascular, (6) paresis, (7) tabes dorsalis, (8) optic atrophy.

Asymptomatic neurosyphilis—this may occur in the first stage of syphilis, frequently in the second. The physician may watch closely for mental signs during treatment, but unfortunately they develop much later than the positive spinal fluid, and, for that reason, even at the risk of repetition, we cannot over-emphasize the need of early spinal fluid examination to avoid irreparable damage to your patient. This form of neurosyphilis usually shows the following spinal fluid reaction: Wasserman or Kahn ++++, globulin positive, lymphocytes 30 to 50, colloidal gold 0123443210. In this disease, except for positive C. S. F. changes, there are no signs or symptomatology referable to the nervous system. In a study made of 2,269 patients with secondary syphilis, only 1.7 per cent had clinical neurological signs and yet 1,747 whose spinal fluid was examined, showed 32.7 per cent with central nervous system involvement. Moore reported that in 352 patients, 20.9 per cent with primary lues, 22.1 per cent with secondary lues of one year duration and 26 per cent of late secondary lues of two years duration, showed positive spinal fluids. Treatment consists of courses of neoarsphenamin or arsphenamin and bismuth or mercury. Arsphenamin 0.3 to 0.5 grams, or neoarsphenamin 0.45 to 0.6 grams are given at weekly intervals for ten injections followed by intramuscular injections of bismuth salicylate 0.2 grams for ten injections, with a repetition of the course. If mercury is substituted for bismuth, the inunctions consisting of 4 to 8 grams 50 per cent mercury are applied five times weekly for a total of 40 applications. When mercury is used, a month's rest should follow with repetition of alternating course. This will usually clear up about seventy-five per cent of all spinal fluids. When the spinal fluid still remains unchanged or progressive, tryparsamide or malaria therapy must be considered and the results from their use clears up many cases where the spinal fluid has remained resistant.

Neurorecurrence—Stokes defines neurorecurrence as either a clinical or serological revival or outburst with a central nervous system involvement following a lapse in treatment where previous to the lapse there was clinical and spinal fluid normality. This form is fortunately rare and seems to occur most frequently in cases that have displayed asymptomatic neurosyphilis and subsequently cleared up. The clinical symptoms are auditory and facial nerve palsy, frequent headaches and dizziness. The spinal fluid usually shows +++ Kahn, globulin positive, a high lymphocyte count, usually 400 to 700, and a colloidal gold of 5554431100. Stokes calls this picture the "red flag," and, where it is present, it demands immediate resumption of treatment in a very intensive form. The treatment usually prescribed, if neoarsphenamin has been used, is arsphenamin and with it,

a course of thirty injections of mercury succinimide intramuscularly with large doses of potassium iodide by mouth. If the response to this is satisfactory, continue alternating these courses for at least two years. If in two or three months the spinal fluid examination shows a paretic picture or the spinal fluid remains unchanged, this treatment should be discontinued and fever therapy or tryparsamide substituted.

Meningeal—subjective symptoms are fever, chills, headaches, fatigue, nausea, vomiting, and dizziness. The objective signs are choked discs, stiff neck, meningismus, convulsions, delirium, coma, reflex changes, aphasia, and nerve palsy, and the following spinal fluid picture: the Kahn reaction may be negative, globulin positive, lymphocytes 80 to 150, colloidal gold 0133420000. This type is caused by an invasion of the nervous system by the spirochetes, which are deposited in the meninges of the brain by the blood stream. This picture might be called a syphilitic basilar meningitis. It was thought at one time that this condition was produced by treatment with arsenicals, but it is now generally accepted that it is due to inadequate and insufficient arsenical therapy. Reports on this condition show that the majority of cases (80 to 85 per cent) show a satisfactory and very striking response to the adequate use of arsenicals combined with the heavy metals. In the cases that fail to respond, malaria therapy followed by intensive chemotherapy with intraspinal injections of arsphenamized serum give fair results.

Vascular — the subjective symptoms are headache and dizziness. The objective signs are mild personality changes and mental dullness, convulsions, aphasia, hemiplegia, and cerebrovascular accident. The blood may be negative or positive, the spinal fluid may show negative or positive Kline or Kahn, the cell count and globulin negative or very slightly increased, and the colloidal gold is negative. It occurs early in the course of syphilis. Cases have been reported in the first month, and numerous ones within one year after the chancre. The age of the patient is usually between seventeen and twenty-five years. Treatment with fever therapy is dangerous because of the frequency of cerebrovascular accidents. Tryparsamide has sometimes given favorable results, but the use of the other arsenicals and heavy metals in small doses combined with heavy doses of potassium iodide offers the best form of therapy.

Meningo-vascular—this group is made up of cases of neurosyphilis showing symptoms that are combinations of meningeal and vascular components whether occurring early or late in relation to the chancre. If treatment is started soon after the appearance of clinical symptoms, the results are encouraging. Wile and Davenport report marked improvement in twenty out of their twenty-four cases following malaria therapy. Fever therapy should be followed by mild arsenicals and heavy metals.

Optic atrophy—this is mentioned merely as one of the complications of neurosyphilis, the treatment for which is fever therapy and sub-dural injections of arsphenamized serum. The results are unfavorable. Tryparsamide is emphatically contra-indicated.

Paresis or syphilitic meningo-encephalitis —this is the late stage of neurosyphilis, and the symptoms are numerous. The most common are personality changes, emotional instability, poor judgment, dysarthria, euphoria, delusions of wealth and grandeur, reflex changes, and tremors of the face. The blood reaction may be negative or positive. The typical spinal fluid picture is a +++ to ++++ Kahn, globulin positive, lymphocytes low, 3 to 6, and a colloidal gold curve of 5555432100. The generally accepted treatment is fever therapy or tryparsamide or a combination of both. The results following their use are fairly satisfactory if the process is not of too long duration before therapy is instituted. The arsenicals and heavy metals alone are of no value. Following fever therapy or tryparsamide, they may be used, but it has not been clearly proved that their use produces any better results in arrested cases than fever therapy alone.

Tabes—the principal symptoms and signs are neuritic or lightning pains, gastric crises, paresthesias of the trunk and extremities, Argyll-Robertson or fixed pupils, diminished deep reflexes, ataxia, optic atrophy, incontinence and trophic ulcers. Blood may be negative or positive. The spinal fluid shows negative to +++ Kahn, globulin ++, lymphocytes 50-60, and a colloidal gold of 0123442000. The treatments in general use considered the

most favorable are fever therapy, intraspinal injections of arsphenamized serum, and tryparsamide. Other agents that are sometimes used are sulphur and oil, typhoid vaccine, and hot baths, but they seem to be of no real value. Potassium iodide is given in large doses over long periods of time although its use is empirical. There is no standard routine of treatment for this disease, and any or all of the enumerated treatments may be used.

In conclusion, it may be stated that in organizing and arranging the material for this presentation, it was necessary to condense the mention of treatments for the various clinical manifestations of syphilis to those in general usage. No detailed description of special forms of therapy, such as fever therapy (either artificial or malaria), intraspinal or intradural arsphenamized serum, or tryparsamide were included. Where too much detail is given, a difficult subject may be made more confusing. Excellent technical descriptions may be found in various texts such as "Modern Clinical Syphilology" second edition by Stokes.

Eloise Hospital.

The Language of Psychiatry

O. SPURGEON ENGLISH, M.D.
Philadelphia, Pennsylvania

Dr. English graduated from the Jefferson Medical College in 1924. Following an interneship at the Jefferson Medical College Hospital, he began his training in psychiatry at the Boston Psychopathic Hospital. After a year there as an interne, he spent a year in neurology at the Montefiore Hospital for Chronic Diseases in New York City. He then returned to Boston to begin work on a three year Commonwealth Fellowship in Psychiatry at Harvard Medical School, which gave opportunity for further work at the Boston Psychopathic Hospital, as well as 15 months abroad in the Psychiatric Clinics of Berlin and Vienna. In 1933, Dr. English became Professor of Clinical Psychiatry at Temple University Medical School, as well as being appointed Physician to the Psychopathic Department of the Philadelphia General Hospital. Since 1938, he has been Professor of Psychiatry at the Temple University Medical School. Dr. English is a Diplomate of the American Board of Psychiatry and Neurology, and a member of the American Psychiatric and American Psychoanalytic Associations.

The language of psychiatry is not difficult to understand. The concepts of psychiatry are not hard to understand either, if doctors are willing to admit that all human beings have emotions—the doctor at the same time being sure to include himself as one of those human beings.

In the past, we have heard and still hear complaints that the psychiatrist can't be understood. In talking about a case, one doctor recently said, "Of course, I never understand you fellows, or what you do. I always say that psychiatry is the fourth dimension of medicine and I have never tried to understand it any more than I've tried to understand the Einstein Theory of Relativity."

I shall not say that there may not have been some justification in the past fifty years for such statements. But the more we learn about a subject, the more simply we can—or should be able to—express ourselves. Lately evidence has appeared, showing that psychiatrists can express themselves simply and with everyday words. If one reads a journal on psychosomatic medicine he will see how the patient's symptoms arose through the effects of emotions expressing themselves through the body—emotions such as hate, jealousy, anger, hunger, deprivation, need for dependency, need for love, lack of affection. All these terms should be familiar to everyone. They have been in the language and commonly understood for years. What we have come to know in psychiatry is that the emotions which these words and expressions connote, and their effects upon the body and the mind, are, to a variable extent, measurable. Every scientist observes, calculates, and tries to measure phenomena. In some sciences this can be done with considerable, though not complete, accuracy. Psychiatrists have been observing and trying to measure emotions for some time and are becoming more and more accurate in doing so. Once an emotional and ideational unbalance is found, the psychiatrist tries to modify the condition.

If we were asked: "What has to be modified in the neuroses?" the answer must be, "Emotional distress or physical distress—feelings or ideas that give pain to the mind

or pain to the body." If we go further and ask, "How did this arise?" the answer must be, "Because during growth of the mind there was a lack of both *facts* and *friendliness*. *Truth* and *trust* were not present, as early and continuous developmental conditions in the home of the person in question."

Let me cite an example. A young man of 33, married and with one child, came to the Clinic complaining of gas on the stomach and belching after meals, pain in the chest with attacks of palpitation of the heart and a sustained worry for over a year that he might have contracted syphilis. The apprehension concerning syphilis did not grow out of extra marital coitus, but out of a benign skin condition on his legs, of about 3 years duration. In addition to this condition, he was sleeping poorly and his ability to concentrate was greatly reduced. He had come to the point where he was able to think only of himself and his body, and its sensations, and of finding some relief for his physical and emotional discomfort. Aside from the benign skin condition on his legs he showed no signs of organic disease.

Let us leave his symptoms for a moment and consider the way in which he grew up. He was an only child of parents, both of whom had been raised in small rural communities. The mother's interests did not extend beyond seeing that the home was well kept and that she raised a "good boy." To be a "good boy" meant that he was to limit his interests to his school work and to being very obedient and respectful toward his parents. Athletic interests were discouraged because he might be hurt; hobbies of various kinds were also discouraged because they were expensive or just "unnecessary fooling around with things." Both the mother and father had been greatly restricted in their youth and seemed to feel that having turned out so well on this regime themselves, they would make said regime twice as effective in the case of their child and thereby produce an individual twice as successful as they had been. In reality, the parents had been successful in achieving a place of respect in the community through their industry and honesty, but had nothing beyond this of emotional, spiritual, or economic value to give to the community or to a group of friends.

When the boy asked any questions pertaining to birth, death, accident, injury, illness, or the financial state of the family, he was always hushed and told to wait until he was older. This shortsighted attitude of the father and mother persisted even until he was over 20 years old. Any question or remark about sex, marriage, or any relation between the sexes was received with a hurt look or expression on the part of the parents, and their words indirectly begged him not to pain them with this awful subject. The father had one or two hobbies of his own outside his work which he never shared with the patient. They never had a friendly talk together even though the father was very devoted to the boy and was actually working all the time for his son's success.

From this picture you can see what happened. The boy was kept in a world of his own. He was expected to be a "good" son and successful in the field of work. Unfortunately, he had been kept emotionally and intellectually so innocent, so out of the everyday world, so prevented from thinking about the realities of life around him, that it is little wonder that the actual outcome was that his mind became entirely absorbed in himself. His curiosity about the functioning of his body had never been satisfied any more than his curiosity about the relations between the sexes. So now in his neurosis he found a solution—a most imperfect one, to be sure, but he had a reason nevertheless to think of his body and to speculate about sex by way of his obsession that he might have contracted a venereal disease. He could not and would not work. Few people can or will work who have been so thoroughly frustrated in the need to come in contact with the meaning of life's fundamental processes through which the individual can feel pain or pleasure.

Treatment of such a case cannot take place through intellectual persuasion alone. This man doubts the sincerity and truthfulness of human beings. How could this be otherwise? His parents never shared his ideas or feelings about life with him. They wanted him to grow up to be a "good" working machine without the rewards of friendship and play, without having his curiosity about life satisfied and without tasting any sensual pleasure. Is it any wonder that he became indifferent to work, even hostile to cooperation, and spent all his time thinking of himself,

his body, and a question which brought him into the realm of sex, i.e., whether he might have had the experiences which bring about a venereal disease? Such a case needs a long period of work with a psychiatrist who can develop a feeling of friendliness for others within him and help him to some degree to live his life over. He needs to have many questions answered—the most important being—"Do human beings (parents and parent substitutes) really tell you the truth about life, death, sex, disease, and do they really tell you what they feel themselves?" "Do they face their own feelings and ideas frankly and would they face all mine with me?" If this patient, and others like him, can find someone who will be consistently honest with them about things (for which we need no special language) then they can soon be set straight as to whether they have diseases or not. In this man's case, syphilis was imaginary. If he can be taught to use his psychic energy in living happily, this energy will not stagnate within him, producing discomfort, nor will it be used in keeping useless ideas concerning a possible disease in constant repetition.

We need simple words and simple principles in order to teach a child about living, growing, loving, hating, catching disease, working, serving, dying. We need no additional words to teach the neurotic person the truth about the same things. In the past in adult psychiatry, we have been guilty of having coined words for the neurotic to substitute for the *time spent* and the *friendship* and *truth* given to the individual who is successfully adapted from the beginning of his childhood onward. If we can just arrange to give the neurotic person some of the friendship and truth he has been missing, the language we use can be very ordinary indeed.

Our patient cited above should have received from his father and mother more understanding and less discipline, more truth and less evasion when he inquired about life and its values; more knowledge and less frustration to his curiosity when he inquired about his body and its function. Later, to satisfy this need for understanding and truth, he was forced to seek help to enable him to solve the problem of living adequately.

I realize that these statements tend to an over-simplification of the field of psychiatry, but an over-simplification at times may have its place. Because we must do a great deal in the shortest time, it is necessary to know as much as possible about the meaning of the neurotic symptoms, to understand the neurotic attitude and how to meet it most constructively, and even to know something of the language of the patient's dreams. I started by saying that the language of psychiatry is not hard to understand, and I insist that this is true. It does not take big words to talk to the unhappy, frightened, mixed-up, and frustrated individual who is the neurotic, and to make him feel better and grow strong by being his friend and helping him to catch up on the meanings of the simpler things of life.

255 South 17th St.

Book Review

ATLAS OF ELECTROENCEPHALOGRAPHY by Frederic A. Gibbs and Erna L. Gibbs. Privately published in Boston, 1941.

If there were a "hit parade" of medical publications, this volume would soon warrant a place high on the list. There are few, if any, authors who can write more authoritatively on electroencephalography than Dr. and Mrs. Gibbs. They have been among the foremost in raising the technique and application of electroencephalography from obscurity to a place where it is one of the most valuable diagnostic techniques available to the neurologist and neurosurgeon. The physical make-up of the book is impressive at first glance and as one delves between the covers, its importance becomes increasingly evident.

An interesting format has been employed and sample electroencephalographic tracings occupy the right page, while their interpretation and comment faces them on the left in one column. Another column on the left page carries the text. The work is dedicated to Dr. Hans Berger, "father of electroencephalography" and acknowledgment is made in the preface to other workers in the field, to the technical and engineering staff who have

developed the equipment and to the cooperating institutions from which the material for the tracings was obtained. Sufficient of the tracings are reproduced so that the cortical activity for 10 seconds or longer can be followed. The record from three or more leads are included, usually the frontal, the pariental and the occipital, unless some particular feature makes a deviation from this practice preferable.

A great many normal records are included for various ages, during sleep and under other more or less standardized conditions. There are, of course, a large number of tracings from patients with various types of epilepsy and in various stages of seizures. The "interseizure" records are especially interesting since it is relatively seldom that a diagnostic tracing can be obtained during a convulsion unless the patient is hospitalized. The characteristic changes during hyperventilation and under the effects of low oxygen tensions are well demonstrated. Typical records from patients with birth injuries, meningitis and encephalomyelitis, multiple sclerosis, cerebral arteriosclerosis, migraine and chorea are included and in each case the characteristic features are described. Perhaps those tracings from brain tumor and cerebral hemorrhage localization studies are most interesting aside from those of convulsive type.

The history of electroencephalography, the activity of the cortex and its similarity to that of other tissues are carefully discussed in the text. The technique is described sufficiently so that a reader who is unfamiliar with the procedure can become oriented. The authors state that the purpose is not to present a textbook but to furnish eye-training in order that a person may be able to recognize the range of the normal activity and recognize obvious mass abnormalities as well as to present enough information to make the figures understandable. It appears that they have succeeded in these aims and have done a great deal more than that. The bibliography which is appended is complete and comprehensive. The book will be especially useful for teaching and reference purposes since no other work of its type is available.

MILDRED GENEVA GRAY, Ph.D.,
Boston, Massachusetts.

Abstracts*

POSTURAL REACTIONS TO VESTIBULAR STIMULATION IN SCHIZOPHRENIA

ANDRAS ANGYAL *and* MAX A. SHERMAN

This is a preliminary report of a study now in progress of vestibular reactivity in schizophrenia. Using a calibrated caloric stimulus, the intensity of reaction is determined by means of various postural reactions. Besides past-pointing and deviation of gait, the blindfolded subject was also instructed to "mark time" in place. The results thus far obtained with the "mark time" procedure reveal greater unsteadiness in the normals than in schizophrenics. Despite active compensatory mechanisms in normals to a degree not observed in patients, the trend reveals greater rotation to the side of vestibular stimulation in the former.

* From the February 14, 1941 meeting of the Massachusetts Society for Research in Psychiatry, held at the Boston State Hospital.

BLOOD-IODINE DETERMINATIONS IN CYCLIC PSYCHOSES

RUDOLF NEUSTADT, M.D.

The determination of blood-iodine was used to study the relation of thyroid activity to mood changes. Studies were made at regular intervals in manic-depressive patients and compared with similar studies in cases of excitement in other disorders. In the manic patients the blood-iodine followed the mood changes independent of changes in motor activity. In other excitements (catatonic, paranoid, paretic, etc.) the blood-iodine levels remained constant. In a case of hyperthyroid psychosis the blood-iodine level parallelled the clinical improvement.

Whether the iodine changes were primary or secondary to the mood changes was not determined.

STUDIES OF PATIENTS EXPERIENCING AUDITORY HALLUCINATIONS

Comparison of Auditory Imagination in "Normals" and Patients Experiencing Auditory Hallucinations

ELVIN V. SEMRAD, M.D.
EVA L. STROMWELL, M.A.

Auditory imagination was studied in twenty individuals: ten patients who were experiencing auditory hallucinations at the time of the tests and ten were normal employee controls. The subjects were requested to produce voluntary auditory imaginations. The stimuli used were adapted from Parker and Schilder (Sam Parker and Paul Schilder, "Acoustic Imagination and Acoustic Hallucinations," *Archives of Neurology and Psychiatry,* October 1935, Vol. 34, Pages 744 to 757) and Griffith (C. H. Griffith, *Fundamentals of Vocational Psychiatry,* Pages 357 to 360, MacMillan, New York). Spontaneous comments and controlled introspections were recorded. All subjects were able to produce auditory imaginations, the patients being able to do so in more instances than the normals. The imagined stimulus seemed to come in a straight path from the "outside" more often in the patients than in the normals. The normal usually could maintain the experience as long as he desired while the patient's experience was a momentary matter; neither thought it had any relation to incidental noises or feelings in his own throat. In most instances, both patients and normals did not think the experience was clear as real, had no relation to incidental noises and was a sound rather than a voice. The patients' experiences seemed to come from the outside directly as compared with the normals' coming from memory. The visual image accompanied the auditory image in practically all the patients while the normals did not require it so frequently and the normals could renew the auditory image without the visual more readily. Usually, the acoustic image did not show any change as long as it persisted, would disappear suddenly or gradually fade out, would repeat but did not always multiply, change in quality and pitch, or have a rhythmic character.

Newsnotes

NOTED JELLIFFE LIBRARY IS ACQUIRED BY NEURO-PSYCHIATRIC INSTITUTE OF HARTFORD

Acquisition of a 15,000 volume medical library described by bibliophiles as the most complete of its kind in the world, was announced on March 2nd by Dr. C. Charles Burlingame, Psychiatrist - in - Chief of the Neuro-Psychiatric Institute.

The library, representing a lifetime of collecting by Dr. Smith Ely Jelliffe of New York, nationally known psychiatrist and Editor of the Journal of Nervous and Mental Diseases and the Psychoanalytic Review, is to be transferred to the Institute "to assure a permanent home for it under conditions which would be of satisfying benefit to future generations of psychiatrists and neurologists," according to Dr. Jelliffe.

In making this announcement, Dr. Burlingame also made public the report on the Jelliffe Library by Mr. Morris C. Leikind of the Library of Congress. "The Jelliffe collection in neurology and psychiatry" states Leikind's report, "is probably the largest and most complete private library in its field in the country. In addition to the 15,000 volumes it contains 25,000 reprints and covers every aspect of the fields in which Dr. Jelliffe is regarded as a master. The psychoanalytic section of the library is one of the best collections of its type to be found anywhere. The value of this collection as an instrument of research lies in its totality. It not only represents a lifetime of single minded collecting, but a lifetime of research and contributions to knowledge. The breakup of the collection would therefore destroy the very thing which Dr. Jelliffe tried to create—that is, its unity."

Included in the collection are some rare historical works dating back to the 15th century as well as practically all important psychiatric monographs from the time of Pinel and Esquirol, pioneers in the enlightened treatment of the mentally ill, down to the present day. Reprints include contributions

from practically every civilized country and, because of the unique method of binding used by Dr. Jelliffe, these reprints are of inestimable value to research workers. Dr. Jelliffe has combined all reprints concerning a specific subject or disease entity in one group so that it is possible for the research worker to trace the development of treatment and historical aspects of that disease in a matter of hours, avoiding weeks of research through card files and by reference to many different volumes.

Title to the library has already passed to the Neuro-Psychiatric Institute, Dr. Burlingame stated, to be maintained on a national basis and provision is now being made to house the library so that it will be readily available not only to the medical and research staffs of the Institute but to other qualified workers throughout the country.

"Dr. Jelliffe has been for more than 40 years one of the outstanding national leaders in psychiatry," Dr. Burlingame said, "forming a triumvirate with Dr. Adolf Meyer of Baltimore and the late Dr. William A. White of Washington, which has been responsible more than any other group for the progress made in this field of medicine during our time. We feel signally honored to be the repository for the great treasures embodied in Dr. Jelliffe's collection."

Dr. Smith Ely Jelliffe has been a practising physician and editor in New York for fifty-one years, having received his medical degree from Columbia University in 1889. He was formerly editor of the Medical News of New York and was for five years associate editor of the New York Medical Journal. Since 1902 he has been managing editor of the Journal of Nervous and Mental Diseases and since 1913 has edited the Psychoanalytic Review. For half a century he has been one of the most prolific and widely read authors of psychiatric and neurological papers, and his "Modern Treatment of Nervous and Mental Diseases" written in collaboration with Dr. W. A. White has long been a standard authority among physicians. In addition he has translated from the French and German language, more than a dozen volumes of psychiatric and neurological work by Continental physicians.

Dr. Jelliffe has served as President of the New York Psychiatric Association, the American Neurological Society, and the American Psychoanalytic Society. He holds membership in many medical societies including the Neurological Society of Paris and the Academy of Medicine of Brazil.

Book collecting has, for nearly half a century, been Dr. Jelliffe's principal avocation; concentrating exclusively on psychiatry and neurology and has frequently expressed the wish that his life-time collection remain intact.

"To have my library pass into the hands of the Neuro-Psychiatric Institute of the Hartford Retreat," he said, "an institution with traditions dating back more than a century, gives me a great pleasure. It is my hope that during the years I may, from time to time, make additional contributions to it."

The library is now in process of being shipped to Hartford, Dr. Burlingame stated. The Institute already has a sizeable library in its Science Building, it was pointed out, with thousands of volumes dating back to its founding in 1822, and with this latest acquisition will give the Institute the greatest library of this type in the country, if not in the whole world.

The Society for Psychotherapy and Psychopathology of New York has appointed a committee headed by Dr. Bernard Glueck to arrange for the publication of one or more of the books of the late Dr. Paul Schilder. Contributions to make such publications possible may be sent to the secretary of the committee: Frank J. Curran, M.D., 404 East 55th Street, New York City.

CORRECTION

We are sorry to announce that there was an error in the paper on "Origin of Senile Psychoses: Neuropathologic Factors and Factors of a More Personal Nature" by Drs. D. Rothschild and M. L. Sharp of Foxborough, Massachusetts which appeared in the February, 1941 issue of the journal. The two lines appearing at the top of the second column on page 49, "He began to expose himself to children. He became childish, irritable and somewhat abu-" should have appeared immediately after the first line on page 50.